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Students' Drawings at the Institute.

THE drawings submitted for the Institute of Architects' Students' Competitions are hung not actually at the Institute (where at present there is no room for such an exhibition) but in the large room of the Alpine Club, reached by the door in Mill-street, Conduit-street.

The subject for the Soane Medallion, by far the most important, as it alone exercises the competitors in the complete designing and working out of an important building, was "A Shakspeare Memorial Theatre," to seat 600, to be placed at the upper (north) end of a large forecourt enclosed on three sides, with streets all round it; the north side or back elevation of the theatre to coincide with the building line of the site, *i.e.*, to be directly on the street. The forecourt was to be laid out in a decorative manner, with a sculptured monument erected in a position on the central axis of forecourt and building. The theatre, intended as a small theatre *de luxe*, was to have no pit, but a parterre of stalls, with a tier of boxes three or four steps above the parterre, which was to be reached by two or more flights of steps between the boxes.

There can be no doubt that the prize has been awarded to the best design, that by Mr. A. G. Horsnell ("Mirth"). The general effect of his design is of a festal character answering to the spirit indicated by his motto. The style is classic; the entrance front is decorated with an Ionic Order with gilding in the capitals. The plan is on the whole very well arranged; the space for the sunken orchestra seems rather cramped, 8 ft. high by 9 ft. wide. One great merit of the design, considered as a whole, is the manner in which the three main elements in a theatre building—the approaches and lobbies, the auditorium, and the stage block with its necessarily more lofty proportions, are distinctly indicated in the exterior design, and control its composition. The forecourt is bounded at the sides by a double colonnade, stopped near the ends by porticoes with columns towards the forecourt; the monument in the centre takes the form of a low pedimented architectural erection from the centre of which springs a column carrying a gilded statue. All the details are in good taste, and the whole is not unworthy of the supposed object of the building.

We look rather more doubtfully on the design by Mr. Berrington ("Horse-shoe"), to which an honourable mention and 10 guineas have been awarded. It is undoubtedly clever and original, but it is rather a heavy and loaded design, which does not hang together very well; and there is a fatal mistake in the laying out of the forecourt, in which the centre part is raised three or four steps and its marginal steps brought round in a semicircle in the front. To introduce this shape between two parallel lines of boundary wall and a straight road at right angles to them in front, shows a total want of perception as to art of laying out ground; a shape like a semicircle should arise out of some suggestion in the general lines of the site; here it is thrust in between boundary lines with which it has no relation whatever. The sides of the forecourt are defined by two rows of square-clipped trees or hedges. The main architectural feature of the theatre is a very ponderous Roman Doric Order. The semicircular attic and roof marking the auditorium is supported by concave-lined radiating buttresses, apparently of stone, but it is not very obvious on what these rest. The large octagonal vestibules in each front angle of the plan are a good feature, and the ladies' and gentlemen's cloak-rooms are planned so as to be out of sight of each other (round the curve of the box lobby), as they should be. The bold stroke in this design is the way in which the author has contrived to give a striking and monumental effect to the back elevation of the theatre, by making the carriage entrances from that side, through two lofty entrances flanked by great columns. This is unquestionably effective, but, if we understand the plan aright, there is no means for carriages to draw up actually at the main front entrance; they can only draw up at side doors. At the outer sides of the carriage entrances are two small separate blocks of building, a Shakspeare library on one side and manager's offices on the other. We should doubt if it is quite so convenient for the manager to be there as inside the main building and in close connexion with the stage. The whole design is clever and original, but not one that could be recommended for execution; it does not blend together as a whole, and it is full of questionable details—among them the shape of the massive stele or truncated pyramid which carries the statue of Shakspeare in the forecourt, the base of which is actually cut into by a kind of chamfer next the ground: nothing could look worse.

Among the other Soane designs, "Touchstone" is a very bold architectural conception, shown in a fine perspective drawing, but it is altogether too big and ambitious for the occasion, and the large dome, which is only an immense empty space above the actual theatre, is quite out of place. The one signed with a horse-shoe device is a dignified square block of building with a Corinthian Order, and a good detail elevation, but it conveys no idea of a theatre, and more resembles a museum.

"Caliban" has placed the lavatories well on his plan; his Corinthian Order looks rather starved, and the design wants breadth and coherence, but the perspective view of the theatre and the architectural surroundings of the forecourt is a very clever and effective piece of drawing. "Sunshine and Air" has good points in his plan, and the dome over the auditorium is graceful in treatment, but the entrance front, with its lofty arch and side porticoes, rather suggests a church or temple than a theatre.

The Tite competition is certainly not a success this year; as mentioned elsewhere, the prize was not awarded. None of the competitors seem really to have understood the problem—"A Sunk Garden surrounded by Loggie," and decorated with a band-stand, monuments, fountains, etc. It has been treated by nearly all the competitors with too heavy a hand; not so much a garden with architectural decoration as buildings abutting on a garden. An Honourable Mention and 10*l.* are awarded to the design marked "Jupiter" (Mr. W. A. Robb), and an Honourable Mention to that marked "Tomahawk" (Mr. W. Friskin). They deserved to be singled out, but we think we should have reversed their order; the architecture in Mr. Friskin's design is better, and better drawn, though perhaps the other comes nearer to the programme in the manner of treatment. "Comprised Within" deserves credit for a clever water-colour drawing showing one of the architectural pavilions.

The designs by Mr. C. P. Walgate, to whom the Grissell Gold Medal has been awarded, are particularly appropriate to ferro-concrete as a structural material, and due provision against excessive conduction of heat and cold is made by the adoption of double walls with an enclosed air space. The stresses have been carefully worked out, but the details of the reinforcement do not suggest practical familiarity with the method of construction represented. The reinforcement of the pier at the east corner of the dome is not satisfactory, especially in the absence of effective lateral ties. Curved bars are used in some places, and although theoretically correct are generally inadvisable for practical reasons. In addition to plain bars the designer has adopted three types of patented reinforcement, making four types in all. This is not a feature worthy of imitation.

The only other set of drawings submitted is that signed "Villain," and in some respects we consider it to be far in advance of that which has secured the medal. The general character of the construction is rather too much after the style of steelwork, but the details of the reinforcement are good. Ordinary bars and rods are employed throughout, and the whole work is designed in accordance with the Royal Institute of British Architects' rules.

The works submitted for the Pugin Studentship reach a very high standard this year, there being two Honourable Mentions. Mr. Henry Hubert Fraser, who has gained this coveted prize, has certainly deserved it. The full-size detail of the central pediment of the Easter Sepulchre at Hawton is a beautiful piece of drawing. The drawing of the porch at Southwold Church is another fine piece of draughtsmanship. We also noticed careful drawings of the painted oak hammer-beam roof of the church of St. Peter and St. Paul, Knapton, Norfolk; a pencil view of Burford Church is particularly admirable. Altogether this a is very fine collection. Mr. David John Chisholm, who has been awarded a certificate of Honourable Mention, runs Mr. Fraser very close in the excellence of his work. The best drawings, perhaps, are those of the Sedilia at Heckington. The drawings of the Candelabrum at Abingdon are the only symptoms this year of the intrusion of Renaissance into this essentially Gothic competition; a certificate of Honourable Mention was also awarded to Mr. James B. F. Cowper. His large view of St. Patrick's, Patrington, Yorkshire, is a fine piece of work. He does not, however, quite seem to us to have mastered the problem of putting a circle into perspective. The clockface on the tower is out of drawing. The same fault is apparent in another drawing. Mr. W. T. Benslyn has also submitted a good set. In particular we liked the drawing of the rood-screen at Benton. The sketch of the goblet at South Kensington is clever. The measured drawings of Top Farm, Willersley, Gloucestershire, form an interesting record. Mr. Berry's Canterbury drawings are splendid. We seem to remember having seen them last year. Mr. F. Hearne is not yet quite up to the standard requisite for this distinction.

The competition for the Owen Jones Studentship has produced a good harvest. Last year, it will be remembered, there was no award, and only one set of drawings was sent in. The Council have awarded the Studentship to Mr. W. O. Miller, who also gained the Travelling Studentship given by the Royal College of Art in 1908. Of the justice of the award there can be no doubt. Among examples of Italian colour decoration which Mr. Miller has studied and drawn are the Chigi Chapel in St Maria del Popolo, the interesting Pinturicchio frescoes in the Picolomini Library, Siena, and the XVIIth century painted plaster decorations of the Cortile of the Palazzo Vecchio, Florence. There is also a splendid drawing of a XVth century carved wood German altar-piece prepared with gesso, now in the South Kensington Museum. Not content with the study of the past, Mr. Miller has sought inspiration from our own days. The careful studies of the Green Dining-Room and Green Refreshment-Room at the South Kensington Museum, designed by Philip Webb, with panels painted by Sir E. Burne-Jones and William Morris, remind us of a brilliant period not long passed away. Mr. H. R. Wilkinson, who has received Honourable Mention, is the author of a set of drawings of almost equal excellence. The drawing of a mosaic panel from the west front of the Cathedral at Orvieto is startling in its illusion. One instinctively touches the paper to feel if the surface is really rough. Mr. Wilkinson also shows drawings (to a larger scale than those of the last-mentioned gentleman) of the Pinturicchio frescoes in the Picolomin Library. A subject that perhaps will appeal most to the present generation is the French example of Louis XVI. interior decoration. The effect, in the drawing, is one of extraordinary richness and refinement. Mr. J. Harold Gibbons is a mediævalist, and he would have us satisfied with the simple and somewhat crude colour scale of the Middle Ages. As an imaginative work his view of the interior of Westminster Abbey as it may have appeared in 1400 is admirable, and should not be missed by those who visit the Alpine Club Galleries. Much as we admire Mr. Gibbons's researches, we fear that they will not be of much service to him now that the fashion has waned.

Mr. C. D. Carus-Wilson gains the Cates Prize with a good selection of drawings. The drawing of the gateway of St. John's College, Cambridge, is particularly good. The most striking piece of work, however, is the perspective of the Library of Trinity College, Cambridge. The design for a Country House is a workmanlike production in the modern fashion. Mr. Carus-Wilson will forgive our saying that he has improved considerably on his sketches dated three years ago. Mr. A. G. Henderson's perspective of S. Maria della Carcere, of which he also submits measured drawings, is well worth notice. The perspective of a Public Library is very pretty. The details of the architectural frame of the Chigi Chapel have the misfortune to be hung opposite Mr. W. O. Miller's studies of the same subject, and are in consequence somewhat eclipsed by the fuller colour of the Owen Jones drawings. The Lucca sketches are excellent. Some of Mr. C. G. Boutcher's work is exceptionally good, notably the drawing of Canterbury Cathedral, a view of the crossing and the Bell Harry Tower. A water-colour perspective of the York Water-gate is a careful and accurate view of its appearance in the XVIIth century, but rather too smooth and shiny. Good work is shown also by Mr. Horace J. Ash and Mr. W. Dean.

The measured drawings are distinctly above the average this year. The Silver Medal goes to Mr. James Whitelaw, for his set of strainers of Stevens' Wellington Monument in St. Paul's Cathedral, which display quite unusual powers of draughtsmanship. The full-size details of the sculpture are beautiful. For his drawing of the Palazzo della Gran Guardia Vecchia, Verona, Mr. Herbert J. Rowse gains Honourable Mention. The perspective is a careful and imposing drawing in pencil and wash. He also submits an elevation of San-Micheli's elegant Palazzo Pompeii, Verona. Mr. Cyril A. Farey's drawings of the Hotel Carnavalet at Paris are extremely good. We liked best the section through the Court. Mr. Farey is also awarded Honourable Mention. These three sets are models of what measured drawings should be, relying as they do on accurate and good drawing rather than on superficially attractive draughtsmanship.

"Ad Metam Contendo" and "Puggins" both send in drawings of the west portico of St. Paul's Cathedral. "Ad Metam Contendo" submits the best of the two. The sculpture is very pleasingly drawn, though it is a

question whether Bird's sculpture is worth drawing at all. "Puggins" fails in his freehand. "Perseverando" has measured the Parclose at St. John the Baptist's, Paignton. He has inked his drawings in in freehand, and very well they look. The experiment is a bold one, and should be seen. This Parclose was built in 1515, and forms the tomb of the Kirkham family. "Manners Makyth Man" has selected for his subject Fromand's Chantry and Cloisters at Winchester College. He has spoiled his drawings by his unpleasant colouring, in particular the perspective sketch. "Q" does not complete his sections of the tower of Christ Church, Spitalfields; the spire is omitted in the longitudinal section. No ceiling plan is given either, which is a pity, because the ceiling is not a bad one of its class and date. Otherwise the set is a good one. "Cyrus" submits a very carefully and neatly drawn set representing St. Bride's, Fleet-street. Each drawing is placed on a wash of blue. Complete drawings of the tower are given in this case. We do not much care for the method of drawing, but "Cyrus" deserves praise for the trouble which he must have taken. Of the remaining sets, that under the motto "Doric," of the stables at Wentworth Park, is, in our opinion, the best.

NOTES.

London Traffic.

FROM the recent Board of Trade Report we learn that special inquiry is now being made into the need for new and improved arterial roads in and out of London, the main objects of the inquiry being to investigate the adequacy of existing roads, their defects of direction and gradient, the nature and extent of the traffic, problems of congestion, the probable development of outlying districts, and the provision of new outlets and by-pass roads as alternatives to the widening of narrow streets in some villages. This looks as if the new traffic department of the Board of Trade mean business; but, of course, any recommendations made will have to wait their turn for consideration by Parliament. It is interesting to note that the large increase of motor traffic in the metropolis has been attended by reduced expenditure on road maintenance and street cleaning in spite of greatly augmented traffic mileage.

Another Shop Fire.

SPECIAL emphasis is given by the great fire at Kilburn to the warning of Mr. Troutbeck, concerning the dangerous nature of the drapery trade. The proprietor of the ten shops destroyed on Thursday last week attributes the outbreak to the fusing of an electric conductor in the windows of the fancy department, whence the flames spread with amazing rapidity, but fortunately without loss of life. Despite the efforts of the fire brigade, the fire seemed to leap from shop to shop, within an hour three of the buildings were a huge furnace, two shops at the end soon became a roofless framework of walls which themselves crashed down into the street after a short interval, and in due course the remaining buildings were completely gutted. Structures of this kind are absolutely unfitted for the conduct of trade in highly combustible goods, and particularly for the dwelling-place of numerous assistants. At the present time the law sanctions, although it does not encourage, the construction and use of death-traps in the form of combustible buildings, and the sooner it is amended the better for all concerned.

Warming and Ventilation of Public Buildings.

THE paper read by Mr. T. W. Aldwinckle to the Association of Engineers-in-Charge is a good *résumé* of a subject not altogether free from difficulties and controversial aspects. The diffusion of artificial warmth and the removal of vitiated air without the creation of draught are matters requiring skilful treatment. In domestic buildings and small hospitals the open window policy answers the purpose of ventilation in a generally satisfactory manner. But for buildings where large numbers of persons are collected it is essential to adopt mechanical ventilation in connexion with air ducts of large area. Mr. Aldwinckle is not a partisan of either the exhaust or the plenum system, thinking the former well adopted to some types of building and the latter to other types. The comparisons made in his paper between various systems of warming and ventilation fully deserve the attention of our readers, as well as of the class to whom it was particularly addressed.

Recent Austrian Bridges.

IN a paper read to the Austrian Society of Engineers and Architects Dr. Nowak gives particulars of four reinforced concrete bridges built on the Steyr Valley Railway. The structures in question were designed for carrying the line over four deep ravines, and, as happens so frequently on the Continent, the new material was chosen instead of steel. The bridge over the Tiefgraben includes a main arch of 131 ft. span, with the rise of about 6 ft. 6 in., approached by girder spans of 49 ft. on one side, and of 49 ft. and 26 ft. on the other. The author states that the total cost of the bridge was only 5,416*l*., a very moderate sum considering the proportions of the work and the special care necessary in the construction of temporary supports. The other bridges are of smaller size, one including a central arch, and the remaining two representing girder construction. A satisfactory feature recorded in the paper is that during the Government tests conducted in October last no deflection was registered, while the bridges were under the full load prescribed. One other point of practical interest is the very small settlement of ·078 in., which occurred at the crown of the Tiefgraben arch after removal of the centring.

Great George-street, Westminster.

MANY of the houses, comprising Nos. 28-35A, extending to Storey's-gate, have been vacated preparatory to their demolition for the erection of new Government offices in the north side of the street and on the Delahay-street site. At No. 25, Sir Edward Knatchbull's, the body of Lord Byron lay in state, 1824, before it was taken to Hucknall Torkard. The house subsequently was taken by the Institution of Civil Engineers, and rebuilt, with Nos. 25-6, for them by Charles Barry in 1894-5. No. 29 was the first home of the National Portrait Gallery, and No. 24 of the Reform Club; at No. 28 lived Lord Chief Justice Eyre, and William Pitt's tutor, Bishop Tomline; No. 31 was the residence of Alderman Sir Matthew Wood, Bart., and afterwards of his son, who continued to live there as Lord Chancellor Hatherley, 1868-72, and also, we believe, of Brunel. Of other famous residents we may mention Lord Thurlow, at No. 15, and Wilkes and Sheridan. The houses at the corner of Delahay-street were built by Henry Wyatt. Great George-street was made in 1749-50 for an approach from Birdcage Walk and the Park to Westminster Bridge from the west; some of the houses we mention, and Nos. 33-4, retain portions of their old decorative ironwork and other fittings. Storey's-gate—the gate remained until rather more than fifty years ago—was named after Edward Storey, who lived on the site and, with Le Nôtre and Morison, made the improvements in St. James's Park for Charles II. The demolition will extend to Nos. 2-12 (even) on the east side of Delahay-street, and will complete the clearance of that thoroughfare: see the "Note" in our issue of November 27, 1909, for a brief account of Delahay-street.

Taunton Castle.

SOME alterations and additions are about to be effected at the Castle for the Somersetshire Archæological Society, who established their headquarters there thirty-five years ago. The Society's collections include six volumes of sketches made in Indian ink by J. and J. G. Buckler, father and son, of architectural remains in the county as they existed in the earlier years of the XIXth century, and the late J. H. Smyth Pigott's large collection of drawings of Somersetshire churches and domestic architecture. Taunton Castle was first built in 702 for his palace by Ina, King of Wessex, 688-728; his successor Ethelheard bestowed it, together with the manors of Taunton and Taunton Deane upon St. Swithin's, Winchester. Remains of the earthworks, with two ramparts, constructed by Ina, are extant along the east and south sides of the inner bailey. The north wall, still marked with its strip buttresses, adjoins the east side of the keep, which measures 50 ft. by 40 ft., with walls 13 ft. thick. In the *Builder* of August 20, 1892, are two illustrations by Mr. Roland W. Paul, of the courtyard and of the gatehouse built in 1493-1501 by Thomas Langton, one of the many Bishops of Winchester who occupied the castle and added to the buildings, during the XIIth-XVIth centuries. In the close of the XIIIth century and beginning of the XIVth century they built the south front and the great round tower, with splayed base, which has been refaced. On Langton's gateway is an escutcheon of a cross charged with five roses, and the date "1495"; in the top-course is a panel, with Henry VII.'s coat-arms

supported by a greyhound and dragon. The great hall, 119 ft. by 30 ft., was built by Bishop Horne in 1597; it was altered in 1785-6 by Sir Benjamin Hammet, M.P., who filled in the moat, and was reinstated and repaired eight years ago.

New Academicians.

THE Royal Academy have promoted Mr. Stanhope A. Forbes, A.R.A., to the rank of R.A.; a choice which will be generally approved. Mr. Stanhope Forbes in his painting has combined artistic power with much observation of life. His "Health of the Bride," the first work which brought him into prominent notice, was like a novel of humble life; every figure was a study of character; nor has he, in that particular sense, ever equalled it since. But the finest picture he ever painted, which we observe is not cited among his popular works in the daily papers, was that of the farm-horse and boy at the drinking-pond (we forget the precise title), a work which owed much to the best kind of French artistic influence. As new Associates the Academy have elected a painter, Mr. W. Orpen, whose work has hitherto been very much outside of the Academical pale; a sculptor, Mr. Derwent Wood; and an architect, Mr. Ernest George, concerning whose election the only surprise will be that it has come so late. As a new Honorary Foreign Academician M. Detaille has been added to a list which already includes, among French artists, MM. Bonnat, Dagnan-Bouveret, Frémiet, J. P. Laurens, and Mercié. We should have thought there were two or three names that might have occurred to the Academy before that of this popular battle-painter: Messrs. Harpignies and Gervais among painters for instance, and Alfred Boucher and Jean Boucher among sculptors. But no one in England (not even at the Academy apparently) knows much about these men and their work—on a far higher plane than that of Detaille.

The New "Society of Engineers."

A DINNER took place at the Waldorf Hotel on Wednesday evening to celebrate the interesting and rather unusual event of the amalgamation of two engineering societies, the "Society of Engineers" and the "Civil and Mechanical Engineers' Society," each of which has had a separate existence of more than half a century; the first-named Society having been founded in 1854, and the latter in 1859. The chair was occupied by Mr. E. J. Silcock, the last President of the Society of Engineers, who, in proposing "The New Society," gave a slight sketch of the history of the Society of Engineers; and Mr. W. N. Twelvetrees, last President of the Civil and Mechanical Engineers' Society, followed with some similar details as to his late Society and some of its leading members. The toast was responded to by the President of the new Society, Mr. Diogo A. Symons. The President of the Institute of Architects and some other well-known members of that body were among the guests of the evening. Ladies had been invited to the dinner, which was altogether a very agreeable celebration of an event of some interest in the engineering world.

COMPETITION FOR NEW PUBLIC BATHS, WOOD GREEN.

THE assessor appointed by the Wood Green Urban District Council, Mr. A. Hessell Tiltman, F.R.I.B.A., has now given his award in the competition for new public baths, Western-road, Wood Green. The first premium of fifty guineas has been awarded to the author of design No. 9, Mr. Harold Burgess, 51, Dunloe-avenue, West Green, N.; the second of twenty-five guineas to the author of No. 11, Mr. E. Harding Payne, John-street, Bedford-row, W.C.; and the third of fifteen guineas to Messrs. F. J. & F. Danby Smith, Parliament-mansions, Victoria-street, the author of No. 5. The competition can hardly be considered to have had a very satisfactory result.

As in so many cases, more appears to have been asked for than could be done for the price stipulated in the conditions. The Council fixed 8,000*l.* as the inclusive and completed cost of the buildings. The sequel is shown by Mr. Tiltman's report, from which we extract the following:—"I have carefully examined the twelve sets of designs submitted in the competition, and I regret to say that owing to the fact that all the designs, more or less, exceed the cost allowed by the terms of the conditions, I am unable to recommend any one of them for adoption. Apart from this excess of cost, the design numbered nine is by far the best in both arrangement, construction, and design . . . . whilst it offers the best opportunity for such modification in sizes as would enable it to be carried out for the stipulated cost. Under these circumstances, to prevent further loss of time, I recommend that the design (No. 9) be adopted, subject to its author modifying his plans to my satisfaction so as to secure the necessary reduction in cost." Mr. Tiltman further gave it as his opinion that by reducing the size of the swimming-bath No. 9 could be carried out for 8,500*l.* We understand that the Council have now decided to allow an outside expenditure of 9,400*l.*

The accommodation required included a swimming-pond 100 ft. by 30 ft., with spectators' gallery in amphitheatre form surrounding it, to seat 500; a separate room containing 100 dressing-boxes, recommended to be placed at the shallow end of the bath; a clubroom opening out of the swimming-bath; ablutionary baths to the number of thirty, ten for women and twenty for men, arranged in two classes; and an establishment laundry. Facilities for the future erection of a separate swimming-bath for women were to be shown on the plan. The site offered no difficulties in the levels. Mr. Burgess's plan is compact and convenient. The ablutionary bath, entrance hall, and necessary offices for attendants form a one-story frontage to Station-road, the gable of the swimming-bath rising behind. It is a pity, so far as the elevation is concerned, that the main entrances are placed out of centre with the gable of the swimming-bath, but this was rendered unavoidable by the plan, and is indeed one of its best features, isolating as it does the women's entrance from the swimming-bath, which will presumably be used by men on most days of the week. The dressing-boxes are placed in a room at the side of the swimming-bath, with an entrance to the shallow end. The spectators' gallery is constructed in three tiers or steps, the steps being sloped slightly to throw off the water, the seats of Oregon pine on bearers. This "waterproof" seating accommodation is an excellent feature, as it would probably be largely used by the bathers themselves on ordinary occasions. The elevations are XXth century Renaissance of a not very interesting type.

Mr. E. Harding Payne's design (No. 11) was placed second. The design is rather in the nature of a compromise. His dressing-box room is in much the same position as Mr. Burgess's, only, not being able to get sufficient space, he has placed sixty-two collapsible boxes on the highest tier of the spectators' amphitheatre in the swimming-bath chamber itself. Further, the roof of the swimming-bath is ceiled with fibrous plaster, a very unsuitable material when we consider the moist, warm atmosphere of a swimming-bath. The elevations are more architectural than those of the first premiated scheme, but the plan is not so convenient. The clubroom is in a bad position, and the women's portion insufficiently isolated to our thinking. Messrs. J. F. & F. Danby Smith (No. 5), who received the third premium, have produced a plan similar in general type to the first premiated. The women's entrance is, we think, not sufficiently isolated from the men's swimming-bath, otherwise the arrangements are satisfactory. Among other designs that of Mr. Maurice B. Adams (No. 1) was perhaps the best. The dressing-boxes are arranged in corridors at the side of the bath, and at the shallow end. Mr. Arnold S. Taylor's plan (No. 2) is ingenious. The dressing-boxes are placed between the men's swimming-bath and the future women's bath. This makes a lop-sided elevation, as the two principal features would be the two gable ends of the swimming-baths, which are unequal in size, the women's being the smaller. The designs were on view at Wood Green Town Hall on Monday, Tuesday, Wednesday, and Thursday of this week.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE usual fortnightly meeting of the Royal Institute of British Architects was held on Monday at No. 9, Conduit-street, Regent-street, Mr. E. George (President) in the chair.

Honour for the President.

Mr. J. Belcher, on behalf of the members, offered congratulations to the President on his election as an Associate of the Royal Academy. The election had not only given satisfaction to his brother architects but to the public generally, who had long since recognised Mr. George as an artist of distinction, and as an architect who was well known to the world. They were glad it had happened during Mr. George's term of office as President, although they would have been still more pleased had it come sooner. However, such were the vagaries of an Academy election, that in spite of every desire on the part of painters and sculptors to chose the right man it sometimes happened that the best men were passed over. They wished Mr. George long life in which he could still further advance the interests of art.

The President, in reply, said his desire was that his brother architects should consider the election a reasonable and suitable one, and that was the only thing he cared about. Probably it was a compliment paid to him as the occupant of the office of President of the Institute at the moment.

Prizes and Studentships.

The Council's Deed of Award was then read as follows:—

THE ROYAL INSTITUTE SILVER MEDALS.

(i.) *The Essay Medal and Twenty-five Guineas.*

Six Essays on "The Treatment of Gardens in connexion with Buildings" were received for the Silver Medal under the following mottoes:—

1. "Aero."
2. "Axial."
3. "Domus et Hortus."
4. "Peter Pan."
5. "Rez de Chaussée."
6. "Rusticus in Urbe."

The Council have awarded the Medal and twenty-five guineas to the author of the Essay submitted under the motto "Domus et Hortus" [John Alexander Ogg Allan], and a Certificate of Hon. Mention to the author of the Essay submitted under the motto "Rez de Chaussée" [John Nixon Horsfield (A.)].

(ii.) *The Measured Drawings Medal and 10l. 10s.*

Twelve sets of drawings were sent in of the various buildings indicated, and under mottoes as follow:—

1. "Ad Metam Contendo": 6 strainers (the West Portico of St. Paul's Cathedral).
2. "Adige": 5 strainers (Palazzo Pompeii and Palazzo della Gran Guardia Vecchia, Verona).
3. "Cyrus": 5 strainers (St. Bride's, Fleet-street).
4. "Doric": 6 strainers (Stables, Wentworth Park).

5. "François Mansart": 6 strainers (Hotel Carnavalet, Paris).
6. "Manners makyth man": 5 strainers (Winchester College).
7. "Omega": 4 strainers (the Senate House, Cambridge).
8. "Perseverando": 6 strainers (Church of St. John the Baptist, Paignton, Devon).
9. "Puggins": 6 strainers (St. Paul's Cathedral).
10. "Q": 7 strainers (Christ Church, Spitalfields).
11. "Roma": 6 strainers (the Wellington Monument).
12. "Volute": 4 strainers (St. Paul's, Sheffield).

The Council award the Medal and ten guineas to the author of the drawings submitted under the motto "Roma" [James Whitelaw]; a Certificate of Hon. Mention and five guineas to the author of the drawings submitted under the motto "François Mansart" [Cyril de Farey]; and a Certificate of Hon. Mention to the author of the drawings under the motto "Adige" [Herbert J. Rowse].

THE TRAVELLING STUDENTSHIPS.

(i.) *The Soane Medallion and* 100*l.*

Seventeen designs for a Shakspeare Memorial Theatre were submitted under the following mottoes:—

1. "Autolycus": 4 strainers.
2. "Caliban": 7 strainers.
3. Star and Crescent on Shield (device): 5 strainers.
4. "Forward": 6 strainers.
5. "Horse Shoe": 4 strainers.
6. Horse Shoe (device): 7 strainers.
7. "Mafie": 5 strainers.
8. "Nunquam Dormio": 5 strainers.
9. "Pro Tempore": 2 strainers.
10. Red Seal (device): 7 strainers.
11. "Sunshine and Air": 5 strainers.
12. "The Budget": 6 strainers.
13. "Touchstone": 5 strainers.
14. Yellow Disk (device): 6 strainers.
15. "Puck": 5 strainers.
16. "L'Espoir": 4 strainers.
17. "Mirth": 5 strainers.

The Council have awarded the Medallion and (subject to the specified conditions) the sum of 100*l.* to the author of the design submitted under the motto "Mirth" [Alick George Horanell], and a Certificate of Hon. Mention and ten guineas to the author of the design under motto "Horse Shoe" [Adrian Berrington].

(ii.) *The Owen Jones Studentship and* 100*l.*

Three applications and drawings were received from the following:—

1. J. Harold Gibbons: 6 strainers.
2. W. O. Miller: 6 strainers.
3. H. R. Wilkinson: 7 strainers.

The Council have awarded the Certificate and (subject to the specified conditions) the sum of 100*l.* to Mr. William Ongley Miller, and a Certificate of Hon. Mention and ten guineas to Mr. Henry Robinson Wilkinson.

(iii.) *The Pugin Studentship and* 40*l.*

Six applications were received for the Pugin Studentship from the following:—

1. W. T. Benslyn: 4 strainers.
2. J. L. Berry: 4 strainers.
3. D. J. Chisholm: 4 strainers.
4. J. B. Cowper: 4 strainers.
5. H. Hubert Fraser: 4 strainers.
6. F. Hearne: 4 strainers.

The Council have awarded the Medal and (subject to the specified conditions) the sum of 40*l.* to Mr. Henry Hubert Fraser, and Certificates of Hon. Mention and ten guineas each to Mr. David John Chisholm and Mr. James B. F. Cowper.

(iv.) *The Godwin Medal and* 65*l.*

Six applications were received for the Godwin Bursary from the following:—

1. T. P. Bauser: 2 strainers.
2. H. V. Milnes Emerson: 6 strainers.
3. J. B. Fulton: 3 strainers.
4. F. Lishman: 6 strainers.
5. W. Milburn, jun.: 4 strainers.
6. A. R. Wells: 6 strainers.

The Council have awarded the Medal and (subject to the specified conditions) the sum of 65*l.* to Mr. William Milburn, jun.

(v.) *The Tite Certificate and* 30*l.*

Thirteen designs for a sunk garden surrounded by loggie were submitted under the following mottoes:—

1. "Alpha": 3 strainers.
2. "Apex": 3 strainers.
3. Woman's Head (device): 3 strainers.
4. "Jupiter": 3 strainers.
5. "Palladio": 3 strainers.
6. "Reverie": 4 strainers.
7. "Rising Sun": 2 strainers.
8. "Spes": 3 strainers.
9. "Tite": 3 strainers.
10. "Tomahawk": 3 strainers.
11. "We have heard the Chimes at Midnight": 3 strainers.
12. "Comprised Within": 3 strainers.
13. "Esperance": 3 strainers.

The Council regret they are unable to award the Tite Prize, but have awarded a Certificate of Hon. Mention and ten guineas to the author of the design bearing the motto "Jupiter" [Mr. William A. Robb], and Certificates of Hon. Mention to the authors of "Comprised Within" [Mr. Anthony Raine Barker] and "Tomahawk" [Mr. William Friskin].

THE ARTHUR CATES PRIZE: FORTY GUINEAS.

Five applications were received for the Arthur Cates Prize from the following:—

1. Horace J. Ash: 6 strainers.
2. C. G. Boutcher: 6 strainers.
3. C. D. Carus-Wilson: 6 strainers.
4. W. Dean: 6 strainers.
5. A. G. Henderson: 6 strainers.

The Council have awarded the prize to Mr. Charles Denny Carus-Wilson.

PRIZES FOR DESIGN AND CONSTRUCTION.

The Grissell Gold Medal and 10*l.* 10*s.*

Two designs for two western bays, forming a portion of a vaulted church, were submitted under the following mottoes:—

1. Villain: 5 strainers.
2. Fra Angelico: 3 strainers.

The Council have awarded the Medal and ten guineas to the author of the design bearing the motto "Fra Angelico" (Mr. Charles Percival Walgate).

THE ASHPITEL PRIZE, 1909.

The Council have, on the recommendation of the Board of Examiners (Architecture), awarded the Ashpitel Prize (which is a prize of books, value 10*l.*, awarded to the candidate who has most highly distinguished himself among the candidates in the Final Examinations of the year) to Mr. William John Roberts, of Manchester, probationer 1908, student 1908, who passed the Final Examination November, 1909.

THE TRAVELLING STUDENTS' WORK.

Godwin Bursary, 1908.—The Council have approved the report of Mr. Arthur Halcrow Verstage, who was awarded the Godwin Bursary in 1908, and who reported on the "Galerie des Machines" of the Paris Exhibition of 1889.

Owen Jones Student, 1908.—The Council have approved the work of Mr. A. E. Martin, who was awarded the Studentship in 1908, and travelled in France and Italy.

Soane Medallist, 1908.—The Council have approved the drawings executed by Mr. George Drysdale, who was awarded the Medallion in 1908, and travelled in France and Italy.

Tite Prizeman, 1908.—The Council have approved the work of Mr. George Drysdale, who was awarded the Tite Prize in 1908, and who travelled in Italy.

Pugin Student, 1909.—The Council have approved the drawings executed by Mr. Sydney H. Miller, who was awarded the Studentship in 1909, and travelled in Lincoln, Cambridgeshire, and South-west Scotland.

Saxon Snell Prizeman, 1908.—The Council have approved the report submitted by Mr. William Milburn, jun., who was awarded the Saxon Snell Prize in 1908, and who reported on the hospitals in Germany.

Carr of York.

Mr. S. D. Kitson proceeded to read a paper on "Carr of York," of which the following is an abstract:—

He said that the only claim he could make upon their interest in this subject lay in the fact that the work of Carr of York was not well known and had escaped the attention which had lately been given to the architecture of the XVIIIth century. The reason for this was not very far to seek, for Carr's work was, frankly, dull and uninspired. It formed a part of the last chapter in the history of the English building tradition.

Carr was a busy and highly successful man—indeed, there were two periods in the history of building in Yorkshire which stood out as times of great activity; the one was the last half of the XIIth century, when the Abbeys of Kirkstall, Fountains, Rievaulx, and Selby were being executed. The other building period was the last half of the XVIIIth century, when a very large number of the country houses in Yorkshire were rebuilt, and many new ones arose. Almost the whole of the building of this latter period was designed by Carr of York. Carr had a similar origin to that of the master-masons of six hundred years before. He was the son, the grandson, and the great-grandson of masons, and he had all the practical knowledge and the hereditary tradition which made for progress in the old days. But he tried no experiments, he made no advance, and the old building tradition after his fifty years of abundant employment had almost disappeared.

When quite a young man, and some time before the year 1750, Carr, conscious of his ability, removed from his native village, Horbury, to York, then, in point of population as well as by tradition, the metropolis of the North. Carr is first heard of in York as the builder of Kirby Hall at Great Ouseburn in 1750, the designs of which were supplied by Lord Burlington and Morris. It is a stately stone house of severe and strictly Palladian aspect, with the *piano nobile* on the upper floor. The stables at Harewood House were built in 1755; Sir William Chambers was the architect, and Carr is traditionally supposed to have been the builder. Again, the building of the west wing of Castle Howard, the designs for which were supplied by Sir William Robinson, is attributed to Carr.

In 1754 the grand-stand on the Knavesmire was designed and built by Carr; and the country gentlemen, who appreciated the amenities of the grand-stand, employed Carr as their architect to the exclusion of anyone else. Henceforward he seems to have ceased to practise as a master-mason and to have become solely a designer of buildings. He had no opportunity for foreign travel, and his only contact with architects hitherto had been that of a master-mason, receiving their instructions; but he was permitted, so long as he gave his clients well-built houses and spacious rooms, to content himself with a very ordinary standard of design.

The first houses which Carr designed were in York itself; large red-brick buildings which still look solemnly out into the narrow streets and rather dwarf their mediæval neighbours.

Shortly after the middle of the XVIIIth century York began to decline as a centre for the fashionable world, and consequently Carr never had the opportunity which came to another Yorkshireman, Wood of Bath, of grouping several dwelling-houses together in "the grand manner," or of laying out squares and crescents in his adopted city. But in the agricultural districts and in the West Riding he was constantly employed in designing country houses. There are two buildings which form the most important turning-points in Carr's career: the first, as we have seen, was the grand-stand on the racecourse at York. The second was Harewood House, which he built for Mr. Edwin Lascelles. It brought him into contact with the Brothers Adam. Henceforward his work lost in robustness what it gained in "elegance." The sturdy practical builder, self-educated in the sound traditions of Inigo Jones and Lord Burlington, gained a smattering of the more modern scholarship and refinement of the Adams, and all Carr's later work bore undoubted traces of this influence. Harewood House consists of a centre with wings, which entirely enclose an area on either side. Eighty years after it was built Sir Charles Barry added attics to the wings and a high balustrade to the central block, removing at the same time the columned portico in the centre of the south front. The chief interest in the house lies in the fact that the Brothers Adam were called in to decorate it; and this they did with all the wealth of their new fashion of flat relief in plaster-work. The furniture was executed by Thomas Chippendale, and his bills for the work still exist; while "Capability Brown," the celebrated exponent of landscape gardening, designed the lay-out of the grounds. Carr was thus brought in contact with some of the most fashionable designers of the day, and he learnt, as all his subsequent work shows, a great deal from each one of them.

A little higher up the River Wharfe than Harewood Carr built Denton Park, a typical example of his larger houses, with wings attached. The masonry is faultless, the design cold, regular, and uncompromising.

In the interior decoration of Denton Carr had thoroughly assimilated the manner of the Brothers Adam, and his ceilings, door architraves and mantelpieces can hardly be distinguished from theirs. These rooms when sparsely furnished, with polished floors and lighted by wax candles, must have suited exactly the atmosphere of the time. But they were comfortable rooms also, for Carr never tried experiments, and his experience made every detail exactly right, whether it was the height of the window-sill or the size and position of the fireplace. The floors were of double thickness, and the cross walls were usually very thick, with double doors, so that his houses were practically sound-proof.

Constable Burton, in the North Riding, was a smaller house, without supporting

wings. The principal floor is on the first story, and the columned portico with the flight of steps formed a fine approach to the entrance hall; but the inconvenience of the outside steps on a rainy night was obvious. Carr seems to have been conscious of this defect, for at Basildon Park a large house which he built in Berkshire, he brought the steps inside the loggia under the portico. When, in 1767, the project of building an infirmary for Leeds was set on foot, Carr was approached by the committee, and wrote from Ashton Hall, "I can perhaps be of use to you in composing the necessary conveniences which are requisite in such a building with some degree of art, but have not the opportunity of conducting the execution for you." Although the building has disappeared, the minute books of the Building Committee are still preserved in the present infirmary, and all the contracts, the prices, the various troubles, mistakes and delays are all minutely set forth, together with Carr's receipt for his fees in connexion with the work.

The stables of an XVIIIth-century Yorkshire establishment almost rivalled the house itself in importance. Carr never made the mistake of his predecessors, who attempted to group them with the house in a wing whose balancing partner was put to some totally different purpose. At Glenstone-in-Craven, a stone house with wings which stands practically unaltered in any particular, the stables form, as usual, a square block standing at some distance from the house. But within them was the unusual feature of a circular stable-yard with a brick-vaulted covered way running all round it. Carr had evidently been studying the designs of Inigo Jones for the Palace at Whitehall. At Wentworth House, which was entirely distinct and at some distance from Wentworth Castle, Carr designed for his early patron, Lord Rockingham, what were perhaps the most magnificent stables in Europe. They were built round a quadrangle and entered through a fine gateway of the Doric order.

The Court House and Debtors' Prison at York, which face each other on either side of the Castle Green, and which are precisely similar in design, formed the only opportunity which Carr was given in York for regular and formal grouping. The plan of the Court House was modelled upon that of the basilicas of ancient Rome. The central doorway opened upon a columned hall, and at either end were two courts of justice, the civil court on one side and the criminal court on the other, each surmounted by a dome containing elaborate plaster-work. Originally the building was open from end to end and the effect must have been very stately. Unfortunately the various parts of the building had now been partitioned off; a development which was inevitable in view of the historic horror of draughts which is a characteristic of the judicial temperament. The Town Halls of Lincoln, Newark, and Chesterfield show Carr's usual careful treatment, and form an appropriate setting for the slow, deliberate municipal life of the period.

In 1791 Carr was elected one of the nineteen original members of the London Architectural Club, who used to meet once a month at the Thatched House Tavern, not to listen to a paper, but for the more satisfactory purpose of dining together. So exclusive was the club that future candidates were to be Academicians or gold medallists in Architecture, and one blackball in the entire ballot was to exclude. During the last years of his life—he died in 1807 at the age of eighty-four—Carr relinquished his work and retired to a country life at Askham Hall, a house which in his early days as a mason he had helped to build.

If Carr's buildings were sometimes dull, they were always sensible, and fulfilled Inigo Jones's requirements that architecture should be "solid, masculine, and unaffected." He himself would probably have been content with such a verdict. He merely claimed, as he wrote to the Board of the Leeds Infirmary, to be able "to arrange the necessary conveniences with some degree of art."

Mr. J. A. Gotch, in proposing a vote of thanks to the lecturer, said that in one point he thought the author had done an injustice to the architects of Yorkshire in that he had only referred to two periods of considerable building in that county, and omitted to touch on the large amount of building done in the late XVIth and early XVIIth centuries. The hills and dales of Yorkshire offered many choice examples of charming little mullioned buildings thoroughly suitable to the surroundings in which they were built. Of course they knew that in the XVIth and XVIIth centuries it was usually the mason who was responsible for the design and detail if he was not responsible for the actual plan. In Carr they had a man who combined both qualifications, and he seemed to have been only thirty-one years of age when he designed the Grand Stand at York and appeared as a full-blown architect. One could not help reflecting on how much less training was necessary in those days for an architect than was the case at present, when the young architect had not only to go in for years of learning, but had also years of wandering, trying to gather experience. Then again, recent decisions in the Law Courts indicated the additional responsibilities which architects had to bear at the present time. All the circumstances of the time seemed to point to the eventual establishment of a sort of firm or limited company to carry on architecture; one member of which would be a designer; another a constructor versed in all the modern methods; another would be a lawyer. Another important thing which they as architects had to take up was the subject of dry rot, and these things Mr. Carr of York was happily free from. The training of Carr however was quite sufficient for the very simple requirements of his time. There was no complexity of planning then, and if the spaces were equally divided that was one of the principal things to achieve. Having got the façade nicely divided that was half the battle, and then they put the plan on to the façade. No houses in those days had an ignoble side, but they were all fine façades. In this respect the XVIIIth century house differed very materially from its predecessors. In the large XVIth century house there was as a rule in front of the principal part of the house a large courtyard full of minor offices, where the servants were sometimes lodged, and where the outside servants undoubtedly did their work and lived. It was thought no disadvantage to a fine house to approach the main structure through buildings which were devoted to more or less ignoble purposes. That idea went out, and with the XVIIIth century houses they had façades of equal or nearly equal importance, which simplified the question of design very much. In the days of Carr there was nothing unexpected, and when they turned round the corner of a house they knew exactly what they would find. Nowadays they generally found something unexpected, and something which very likely was undesirable. Having referred to the confusion which existed in the minds of those not intimately acquainted with the locality as to Wentworth House and Wentworth Castle, and also as to Burton Constable and Constable Burton, Mr. Gotch said allusion had been made to Carr being a member of a society of nineteen. When he was young his uncle told him there used to be only twelve architects in London, who were called the apostles. He supposed the seven were a kind of apostles to the Gentiles like Carr. Mr. Gotch, in conclusion, drew attention to a painting of Harewood House in its original condition which was exhibited in the room, and remarked that it showed an English painter's conception of what a house should look like, for the house was a mere incident in the landscape.

Mr. Tipping, in seconding the motion, said he wished there were other men who would let them know more about the architects of the past. Carr was dismissed in the "Dictionary of National Biography" in a very few lines. Whilst they knew that in mediæval times, and often in Tudor times, the stonemason or the builder was the architect, yet they were apt to think that all was changed with Inigo Jones, and from his time they had only the architect who had worked at the drawing-board and travelled to Italy. They found by their study of Carr that this was not so even down to the early part of the XIXth century, and they would find many instances in the XVIIIth century. They knew that Lord Burlington and many of the architects who worked with him—like Kent and Campbell, visited Italy and Rome, and drank from the source of classical Palladian art, but there were many at the time who shared with Carr their origin in the stonemason's yard. They had Smithson and Thomas Webb, mason, of Middlewich, Cheshire. Webb was as much an architect as any of them that day, although he called himself a free mason. The method of payment was interesting, as they knew it was always a question of whether the percentage system was a wise one. Many clients demurred from the system, and said that however great an artist the architect might be he was rather inclined to be a bill of extras. It was not so in the case of Thomas Webb, who was paid 50*l.* down and had meat for himself and his horse. It would be interesting to go through the records and see whether Thomas Webb had any distinct position in his day, which was in the reign of Charles II., such as Carr had. Although Sir R. Taylor was not a stonemason himself, yet he was the son of a stonemason, and did not become an architect until Carr's career was begun. Both Ridley and Kent were Yorkshiremen, and, although their fathers were not stonemasons, yet they were connected with building trades. Kent was apprenticed to coach-painting, which was then a matter of finished design, and was one of the high arts. Although there may have been a good deal to be said in favour of deriving information and training not so much from the drawing-board as from actual workmanship, yet it was perhaps in many cases against originality. Mr. Kitson had had to allow that Carr was not an original architect at all, but was content with carrying on the sound traditions he found. That was good, but they wanted a little originality, and an interesting point in connexion with Harewood House was the contrast afforded by the work given to the Brothers Adam and that which was left to Carr. The Brothers Adam were called in to decorate the house, and in the great reception-rooms there were some of the best examples of their style. The Brothers Adam looked forward and originated a style, whilst Carr always looked back, and belonged to those pattern-books which had their foundation with Inigo Jones. Thus they found at Harewood that the Brothers Adam did not go into some of the rooms at all, and the style was that of Kent and Ripley, and other architects of the school of Lord Burlington. Another of Carr's houses showed that he had some of this conservative tendency as regarded environment, just as he had with regard to decoration. He referred to Tapley Hall, in Cheshire, built at least twelve years after Harewood House. The lay-out was more than a foreground. At Tapley the stables were built quite separately from the house. Beyond the quadrangle of the forecourt they had a considerable portion of drive with elaborate arched entrances, partly down the drive. It was an admirable lay-out and worth the study of anyone wanting to design an approach to a house in the Palladian style. He would like to suggest that some Warwickshire architect should look into the records to find out more about

Smith, of Warwick, who was one of those stonemasons who certainly succeeded as an architect, and there were some grounds for believing that he had something to do with the erection of Sutton Scarsdale.

Mr. H. H. Statham said that although Mr. Kitson had referred to Carr's architecture as rather dull, the reverse must be said about the paper. He was particularly interested with what was said about the plan for the courts at York, and Carr's idea of having a vista from one end of the hall to the other. He was an old Liverpool man, and naturally interested in St. George's Hall, and it was Elmes' original intention in planning that hall to see some day a great vista from one end to the other; to see the judges seated in the courts at either end of the great hall. When it was proposed to build a large organ to fill up one end of the hall, Elmes was very angry indeed, and said it would quite spoil the vista. Another point was the external staircase, which Carr, from practical reasons, gave up in his later days. He had a strong feeling himself that these staircases were one of the finest features of XVIIIth century mansions, but it seemed the present generation had got so soft that they were afraid to go outside into the rain. He stayed every year at a house in Ireland, where it always rained, where there was a great external staircase, and he always had a feeling of satisfaction that the steps were there, and the rain did not matter at all. He would be very glad to see some architect or building owner revert to this exceedingly fine scheme of placing the main floor at a considerable height from the ground, and have an external flight of steps. Mr. Kitson had referred to a drawing of Carr by Dance, which reminded him that at the last winter Loan Exhibition of the Academy Dance's portraits of Academicians were exhibited in the Water-Colour room. What struck him was that Dance must have had rather a strong personal equation, because the portraits had such a remarkable similarity. With regard to the lay-out of Harewood House, he would not say that Capability Brown had anything to do with that, for his notion was to cut down all trees and make the ground in front of the house a large meadow, and have a sunk fence. He hardly thought that Capability Brown would have left as many trees as were shown in the picture, and at all events it was not like his planning.

Mr. Guy Dawber said he had been much interested in what had been said about the practice in different towns in England, and if their younger men really looked into these things they might get valuable information. It always seemed to him that many of their towns bore the impress of the work of one man. They saw it in the case of Carr of York, and if they went to Stamford they would find the delightful XVIIIth century work was due to one leading spirit. They found it again later on at Bath, by Wood, and Nash, and Adam. Another most important man was H. Bell, of Lynn, who was twice Mayor of that town. Descended from a Baron of the Exchequer in Queen Elizabeth's reign, Bell's family settled in Norfolk, and Bell subsequently practised in Lynn as an architect. He was born in 1653, and in 1683 he built what all would admit was one of the most beautiful buildings in the whole of the country—the Customs House at Lynn. He also built a series of remarkably beautiful houses in the town, many of which had been mutilated, but which in their interiors still retained some of the work which was quite as fine as anything Wren did. Bell also designed the altar-pieces of St. Margaret's and St. Nicholas, and there was a record that he was paid the sum of 10*l.* for designing the altar-piece of St. Margaret's, which sum he expended in having the altar-piece gilded. He also built that unique church of North Runton, which had been altered a little, but stood out as one of the most interesting buildings of the later part of the XVIIth or early part of the XVIIIth centuries in that part of Norfolk. That was only one man, but he was quite convinced that if they looked into the matter they would find in many of these towns one architect who had laid the impress of his work upon the surrounding district.

Mr. A. T. Bolton remarked that in the biograph of John Dobson it was mentioned that he was employed in making doors and lobbies for houses built by Carr, and he wondered whether Mr. Kitson had noticed anything which might be attributed to Dobson. He thought that the paper had shown very clearly that this mason architect was very limited in his work. They had been shown a vast amount of the work he did, and also its extreme similarity, and another point was that when Carr came under the influence of a trained architect he was simply nowhere. He was at once carried away and imitated their work; and doubtless he employed the same plasterers Adam did to do the work he was responsible for.

The vote of thanks having been carried,

Mr. Kitson, in reply, said Constable Burton was an entirely new house built by Carr in the North Riding. The story was told that Carr was called in by an ancestor of the present owner, who was starting on the grand tour, to do some alterations to the kitchen range, and when the owner returned he found the beautiful Elizabethan house was cleared away and Carr had built an entirely new house. He (the speaker) was told the story, and replied that modern architects had no such luck. Burton Constable was an Elizabethan mullioned house, but, curiously enough, there existed complete plans by Carr for the "Palladianisation" of the house, which luckily never came to pass. He agreed that when Carr came into contact with the Brothers Adam he became an inferior Adam, which was disappointing. They might have expected that Carr would have given a provincial variety of Adam's work which would have been of great interest, but he was afraid the truth was that Carr was not particularly interested in his work as an art, but looked upon it merely as a means of making money, and of rising out of his own class. He left 160,000*l.*, which was considerably more than any architect up to that time had left, and as much as any architect had left since. The thing which really interested him was how to become a country gentleman, and that of course absolutely killed originality in any art.

The President announced that the next meeting would be held on January 31, when the prizes to the students would be given.

THE ARCHITECTURAL ASSOCIATION:

English and Continental Ironwork.

An ordinary general meeting of the Architectural Association was held on Friday last week at No. 18, Tufton-street, Westminster, S.W., Mr. Henry Tanner, President, in the chair.

Mr. E. Gunn, Hon. Secretary, having read the minutes of last meeting, Mr. Maurice Webb, Hon. Secretary, announced a meeting of the Debating Society on the 28th inst., when a paper entitled "Church Architecture: Gothic *v.* Classic," by Messrs. W. G. B. Lewis and A. E. Bullock, will be read.

The President said that most of them had no doubt heard that Mr. Ernest George had been elected an Associate of the Royal Academy; and he should like to send Mr. George, on behalf of the Association, a letter of congratulation on the honour he had received, and which some of them thought he ought to have received before.

The motion was heartily agreed to, as well as a vote of thanks to Mr. H. Chatfeild Clarke for donations to the library.

Mr. J. Starkie Gardner then read the following paper, entitled "A Comparison between English and Continental Ornamental Ironwork":—

"Throughout the Renaissance period in France the ironwork, like the architecture, was traditional, but profoundly influenced by that of Italy, for François I. and Henri II. and his consort encouraged Italian artists to work and settle, just as his contemporary Henry VIII. encouraged them to settle here. His fickle continental alliances however led him also to favour Germans and Flemings. Such influences were not lasting as regards ironworking, and except richly decorative locksmithing which had always been a cherished art in France and neglected here, the ironwork in both countries was alike meagre and utilitarian.

Revival of Ironwork in France.

The first indication of a revival is seen in France, and practically coincides with the accession of Louis XIII. in 1610. The Italian influence had long since waned there, and Henri IV. had himself suffered through it. It is true that ironworking was in full swing in the bordering countries of Germany and Spain, where the smiths were indulging in *tours de force*. But the revival in France is absolutely free from any trace of the influence of either of these countries. It was a new style, gradually evolving, elegant and restrained, in the native taste, but with an ever-growing tendency towards the rich and sumptuous curves and scrolls of the Baroque. Rubens had a commanding influence in France from 1622, when he was decorating the Luxembourg for Marie de Medici, almost to the time of his death. The arts, painting, sculpture, and architecture, felt his influence deeply, how should ironworking escape it? Rubens may personally never have prompted a design in ironwork during his life, but he powerfully influenced, if he did not inaugurate, the sumptuous freedom and splendour of colour which characterised French art for upwards of a century. The ironwork followed the same lines as far as the material permitted, and as might be expected from a material so facile when hot, and in the hand at the outset of gifted craftsmen, wholly unrestrained by traditions and rules, it developed even more rapidly, but more consistently, than in Spain or Germany. Ironworking became a firmly established art in France, and it remained so, apart from modifications due to changes of fashion and sentiment, until the monarchy itself ceased to exist. To trace its development, however, is a difficult task, and one I am not qualified to follow up to-night. The French smiths began to engrave and publish their designs in 1615, following the example set by Androuet du Cerceau. Louis XIII., who died in 1643, had been a great patron, and it is certain that much fine ironwork had come into existence in France during the first half of the XVIIth century, which could hardly fail to attract the attention of travelling Englishmen. The rails round the statue of Henri IV. on the Pont Neuf, ordered by Richelieu in 1640, were lofty and of plain bars with a rich cresting, and Evelyn notes them as a "strong and beautiful grate of iron." He also observes, under date 1649, of the gardens of the Château de Maisons, "the yron gates are very magnificent." These were perhaps those by Jean Marot, who was but thirty years old, but his illustration of them was not published till much later. They would well deserve the encomium of "very magnificent," for they are indeed the well-known gates that now, brilliant and polished, close the Galérie d'Apollon of the Louvre.

It is strange that the taste for rich ironwork did not at once penetrate from France to England under the artistic and cultured Charles I., who was such a princely patron of Vandyke and Rubens. Under Cromwell the English Channel was probably a *mare clausum* to French art; but it is almost wholly inexplicable that the reign of Charles II., with its influx of highly-skilled Huguenot craftsmen, should have failed to welcome it, just when it was at its zenith in France. As the young King Louis XIV. expanded into the *grand monarque* towards

1660 the field for the smith's art rapidly widened. Royal and noble palaces were approached through spacious courtyards surrounded by iron railings with magnificent gates; while the gardens, parks, and avenues by which they were environed demanded elaborate iron fences, gates, and wickets. Staircases were enlarged into grand architectural features of palatial dimensions, and occupying central positions, required iron balustrades of the most sumptuous possible character. The smiths, thus stimulated, naturally vied with each other in the magnificent pride of their work and the increasing difficulties demanded from its execution. The greatest architects entered the arena of rivalry and supplied the designs. Mansard designed the screens for Clagny and for Meudon; Girard that for St. Cloud, and Gittard that for St. Maur. Men of such boundless influence as Jean Lepautre, Jean and Daniel Marot, Jean Bérain, Jean le Blond, and Langlois, published *Livres de Serrurerie*, or included numerous designs for smiths in their works on ornament. Lesser men followed suit, while the smiths themselves by no means desisted from publishing pattern-books of their own work throughout the reign. These publishers among the craftsmen were, as in all times, by no means the best workmen.

The commissions given by the King for Versailles alone amounted to over a million livres between 1664 and 1680. This extravagance led to the disgrace, and thus, indirectly, to the death of Colbert; as a mistake in the measurement of a window led to a quarrel with Louvois, who only averted disgrace by plunging the *Roi Soleil* into a new war. Of these works, the smiths, Godignon and Dezeutres, executed the great screen, and Luchet the gates, to the Court of Honour at Versailles, at a cost 32,500 livres. Simon Delobel made the doors to the *escalier du Roi*, and numerous balconies; and Caffieri and Lespagnandel the stair-rail. The Royal work was divided impartially, and every capable smith had his share. There was work for all under such a patron.

Ironwork in England.

Though Charles patronised Frenchmen like de Grammont, and raised Louise de la Quérouaille to the peerage, and had his grounds laid out in the French taste of Le Notre by Verrio, no ironwork in the French manner appears in England during his reign. Such as there is is extremely plain, not more advanced than that produced in France a hundred years before. There are however a few notices and other slight indications of the existence of some more decorative ironwork scattered here and there, but not enough to be convincing. It is strange, too, that Wren was in Paris in 1665, "prying into trades and arts," as he wrote home, while the superb gates, railings, and balustrades to the Palais Royal, the Bibliothéque, and the Palace at Fontainebleau, and in many of the churches were already in position, work such as had excited the admiration of Evelyn sixteen years before passed without notice by him. Wren was no doubt impressed, but he showed no desire to encourage similar work at home.

On the contrary, there is a curiously plain and geometric pair of gates to the Ashmolean at Oxford, built probably by Wren in 1677. The railings to the Sheldonian Theatre at Oxford, completed in 1668, are interesting as associated with a building erected by Wren so soon after his return from Paris. The bars are lofty and straight, but perfectly plain, with the horizontal low door, the only relief being a scrolled head to the central standard of each bay. These are between the great stone piers with heads of fawns a landmark for visitors. A contemporary engraving shows them to have been put up with the building. A pair of gates of the same construction and destitute of ornament still remain in the corridor behind the rich and later gates of the Clarendon Press.

The taste for fine ironwork was thus clearly not due to Wren, who apparently appreciated it as little as his great predecessor, Inigo Jones.

Jean Tijou.

The accession of James made little difference, and it was not until the arrival of the Prince and Princess of Orange, who were inimical to France, that a taste for rich ironwork in the French manner arose in England. The year 1689 is a momentous one in the history of English smithing, for it introduces "Monsieur Jean Tijou," a mysterious person as to whom little beside his work is for certain known. He was no doubt a French Protestant with whom the Princess of Orange must have been acquainted before or from the moment of her arrival in England. It can, therefore, be safely inferred that he was one of the French Protestant refugees in the Netherlands, and that he came over in the Princess's train. He was unknown, or had at least published nothing, for Guilmard, in his exhaustive work on the *Maitres Ornamentistes* only records him as a *dessinateur anglais* who worked towards 1720. It seems he became a parishioner of St. Martin's-in-the-Fields, for his daughter was married there to Louis Laguerre, the French decorative artist and pupil of Verrio. A Mrs. Ann Tijou, possibly his mother, who died in 1708, another Tijou, and Laguerre were all buried there, and descendants still live in Soho. His own place of burial and residence and his wife's are unknown, and no will was proved.

However, scarce had the Prince and Princess become King and Queen before Tijou rendered his first bill for six iron vanes "finely wrought in leaves and scroll-work," 80*l.*, and a rich iron balcony, over the river, to the water-gallery, where the Queen was to reside while the Palace was building. In this balcony she and her maids were accustomed to sit, work, and receive visitors. His second bill, still extant, was rendered in 1690 for the famous garden screen, 755*l.* 7*s.* This was for the Fountain Garden, a semicircle taken out of the Home Park by Charles II., and which Evelyn saw finishing in 1689. It comprised five fountains and three broad walks, two to the great avenues in the Park, the third to the head of the Long Water. Such a screen, of unusual extent and richness, was required perhaps to insure privacy, while clipped yew hedges, beloved of the Dutch, were growing, for the garden faced the principal front of the Palace, and was the first laid out for King William and hurriedly completed. Two "lion gates" formed part of the screen. This work for the water-gallery and garden being finished, there was probably a lull till the new Palace was ready, but in the interval Tijou was at work elsewhere, the Chatsworth work being completed before 1692, at a cost of 528*l.*; and on that at Burleigh; and perhaps he was also getting on with the magnificent gates for the triple arches of the new front to the Palace, opening to the garden. They still exist, and are examples of his richest work, and standing in shelter they remain to this day in perfect preservation. Each consists of one oblong panel half the height of the gate, a wide and richly-worked lock-rail, and a square panel beneath, the central pair of the three being the richest. The upper panels are scrolled round a central oval, the whole almost hidden by embossed acanthus and flowers. The lock-rail is as rich, and the square panel below repeats a four-way scrolled design radiating from a centre. All are in the rectangular double frames joined at the angles by short diagonals characteristic of his work. The side gates are similar, but less rich, and above them is a lintel of scrolls and acanthus. They form the chief item in Tijou's 1694 bill for 1,153*l.* 12*s.* 6*d.*, which comprised some plain staircase rails. Two other pair of gates are shown in Sutton Nicholl's engraving of 1695, which no longer exist at Hampton Court, though one may now be at Eaton Hall.

Royal Patronage.

From these bills it is clear that from the moment of his arrival he was under the immediate patronage of the Queen, who is known to have taken the greatest interest in the gardens and probably ordered the ironwork personally, and on her own initiative, the King, as is well known, being too much occupied and away. In 1693 he published his great book of designs, and paid her Majesty the graceful compliment, as it then was, of potraying her as Juno reclining, attended by Vulcan, Mercury, Saturn, Amorini, and a group of the Arts. The man in the frontispiece, with strongly-marked features, long hair, and heavy moustache, in redingote and cravat, who is closely inspecting the work of four brawny smiths, is almost certainly Tijou himself, a portrait by his talented son-in-law, Laguerre, who designed it. The other engravers were well-known artists hailing from Antwerp and Amsterdam. This most expensively got-up book is the first of its kind ever published in England, and introduced the custom long before in vogue in France. It is marked as on sale in London without further address, proving that he resided here and believed himself to be a well-known personage. The plates comprise, in addition to designs for Royalty, those for Chatsworth, Burleigh, and Wimpole, with others impossible of execution in iron. The book was "for the use of smiths." Partridge, a London smith, seems to have borrowed one of the baluster designs for the library staircase of Trinity College, Cambridge, built by Wren.

Work at Hampton Court.

In 1694 a heavy and unforeseen misfortune befell Tijou in the lamented death of his great patron the Queen. Work at Hampton Court practically ceased in consequence till the destruction by fire of Whitehall Palace, in 1698, drove the King to complete it. The Fountain Garden was enlarged for eight additional fountains, and the beautiful screen was removed to the Privy Garden on the south front, then being laid out, where 832*l.* was apparently expended on masonry to receive it. The gates remained still to shut off the garden walks from the Park avenues, and the balustrade for the King's staircase, designed five years before, was ordered from Tijou. This enlargement of the garden and removal of the screen, necessitated 1,442 ft. of new iron rails with 172 panels for both sides of the Fountain Gardens, which were designed by Talman, clerk of the works, who also estimated the cost at 2,132*l.* 16*s.*, at 5*d.* per pound. Tijou undertook the work, but charged 3,675*l.* for it, and a balance of 1,889*l.* 1*s.* 6½*d.* became the subject of appeals and petitions. It was unpaid when William III. died in 1702, and Anne, who cared little for Hampton Court, was loath to pay her own bills, much less those of her predecessors. Tijou enjoyed no more royal patronage, and Talman was not the man to pass such an overcharge. Other existing works of his seem to be gates at the Clarendon Press and Bridewell, similar to those of the triple arch, an entrance to Burley-on-the-Hill, and part of the work at Drayton House.

Work at St. Paul's.

His work in St. Paul's is well known. It commenced as early as 1691, with windows for the choir at 6*d.* per pound, which were made at Hampton Court and brought to London. All the panels, screens, altar-rails, choir-gates, and balusters, in which embossing is extensively used, are by him, apparently aggregating to a total of between 4,000*l.* and 5,000*l.*, and extending over a period of nineteen years. His work finished in 1711, when he pressed to have his account settled in terms which make it appear that

he was not in easy circumstances after twenty years of work. He left the country, leaving his wife to collect the money and follow him, the family tradition says, broken-hearted. At St. Paul's the plainer work was only given subject to competition with two English smiths, one of whom undersold him. He probably went to Paris to dispose of his copper-plates and designs to a celebrated smith named Fordrin, who later republished them in his own name. He is reputed to have worked at Canons, but if he commenced there he must have abandoned the work, leaving it perhaps to his assistants.

That Tijou was an artist of the first rank in his day can never be disputed. He must certainly have executed the masks and finer embossing with his own hands, for it is by a master. It is also clear that he set out his own work, for a joiner is paid for glueing boards for Mr. Tijou to draw the iron screen upon. We may reproach Tijou for redundant richness, and that the actual smith's work is little more than material to hang his foliage on. He was clearly an artist and an embosser, but never a practical smith, as is evident from the designs he published.

The credit of the work has been assigned to Huntingdon Shaw, a smith of Nottingham. There is no evidence to sustain such a claim, which rested solely on the inscription on a monument in Hampton Church, and it has been conclusively demolished. We may, however, believe that the tradition had some basis of fact if we please, for Tijou must have had a working foreman, his works were for a time at Hampton Court, and Shaw's death in 1710 almost coincides with Tijou's relinquishing business. Shaw was never either a master craftsman or designer, and as far as actual proof goes there is none whatever that he was even a smith. His estate nevertheless adorns the new Victoria and Albert Museum as our only representative of smithcraft, though an official inquiry made by the Board of Education had demonstrated that Shaw's name is nowhere recorded in connexion with any ironwork at Hampton Court or elsewhere.

I have dwelt at some length on Tijou, for whatever we may think of his work, and no one visiting St. Paul's can deny that it is appropriate and beautiful, he alone raised smithcraft from the lowest level into a flourishing craft, patronised almost immediately by Royalty, and almost the entire aristocracy of the country. As designs, most are essentially in the French taste of Louis XIV.; but when executed the work becomes something different. Whether modified by the taste of the patron, or the architect with whose buildings it is so generally associated, it appears, as I am pleased to think, more English in design, less grandiose and assertive, stronger and more practical.

We have some ground for believing that Tijou's very florid ironwork was not to Wren's taste, and, therefore, that he was no willing patron, for, while he extols Grinling Gibbons in his memoirs, he is silent as to Tijou. This is strange after an association of twenty years. Tijou ignores Wren in the dedication of his book of designs; he sent his estimates and bills direct both to the Crown and to the Cathedral authorities, and the indoor work at Hampton Court, such as would naturally be left in Wren's hands, like the balustrades to the King's and Queen's back staircases, the Privy stairs, Lord Portland's, and others, are as plain as can be, with no traces of the beaten leaf work of which Tijou was so lavish.

When Tijou disappeared his apprentices, assistants, smiths, or whoever he employed must have remained. Whether he actually brought any foreign workmen with him is unknown, but none are heard of after his departure. Presuming Shaw to have been his foreman of works, he, too, had departed, and the road was clear for successors. The only work in the Home Counties, however, that can certainly be attributed to a pupil is a pair of gates made for Canons, and now at the Durdans. They are designed after Tijou's style, but not carried out by a masterful hand.

Robert Bakewell.

Robert Bakewell was probably one of his original assistants, but must have seceded before 1707, perhaps from ill-health. He adopted Tijou's style, but diverged from it greatly as time went on. He made a summer-house for Melbourne, the work on which was interrupted by long illnesses, and not finished till late in 1711. He then set up a workshop in Derby, and his work is widely spread over this and neighbouring counties. We hear of him for over a dozen years more, and he probably worked on much longer. Two brothers at Chester followed more or less in Bakewell's footsteps, and produced some very important and noble and original forecourt screens. They may have worked at Drayton House, but so far are first heard of some time after Tijou had departed. A very fine smith at Bristol had a great vogue round about, and executed splendid work in the manner of Tijou, though his designs were often weak and bizarre. These men practically monopolised the West Country and the Midlands, but, strange to say, no disciple of Tijou's settled in the Metropolis, and the very distinctive styles these men introduced died out with them.

Work of Thomas Robinson.

The English style came into existence and developed side by side with Tijou's work. As far as can be traced at present, Thomas Robinson is the man to be most honoured.

The earliest mention of this name I have yet met with is in 1697, when he had produced the beautiful railing to the Morning Prayer Chapel in St. Paul's Cathedral. The fine leaf-shaped spikes on hollow balls, fashioned by the hammer, the latter from sheet-iron, and the more massive standards between, are excellent work in the English spirit. Two years later we find Robinson supplying the wrought windows for the Cathedral at 5d. per pound, when Tijou was getting 6d. Later other work followed, which it is needless to specify. The Cathedral accounts show that he was employed until 1711, when Tijou's departure left him a clear field. In this year he was erecting the very fine gate and railings at New College, Oxford, and an eye-witness records that he was an "ingenious" smith, at that time the term of highest praise, and that his works were at Hyde Park-corner. There are thus several works known of his, and from these it is possible to identify many others, though less certainly than in the case of Tijou's followers, whose mannerisms leave us in no possible doubt. Conditions of work in London make it so very easy to appropriate other people's ideas. Other names have come to light, men perhaps taught in Robinson's workshops, and yet others will be discovered, all working practically on much the same lines. Robinson, however, must have had a long career or very capable successors. Indeed, I have been told that the firm continued as a foundry on the site of Victoria Station till the railway took it over. The effects aimed at by Robinson were lofty and perpendicular, never horizontal, and he obtained them not only by carrying the bars to a great height, but by avoiding interruption of their vertical lines by horizontal ones. The piers were carried right up through and interrupting the top horizontal without any break, and were relatively slender and surmounted by high pyramids of scrolls and finials, with perpendicular effects like those of the Gothic architecture around. The finely-designed overthrow to the gates is also aspiring and lofty, and the whole design remarkable for its sparing use of embossed work, a rich appearance conferred by the numbers of sharply crinkled welded water leaves, which diffuse a beaded look over the whole surface. The contrast between this and Tijou's work is very striking, for he and his school never purposely aimed at obtaining commanding and lofty effects by the use of uninterrupted vertical bars, but sought them chiefly through the magnificence and richness of detail of the embossed work.

Robinson repeated his success at Trinity College, Oxford, where little of his work now remains, and it seems safe to regard the fine works at Belton and at Beddington as his, these having similar characteristics. It is more difficult to claim for him the immense screen or grille at Carshalton Park, which presents the most dignified and grandly perpendicular effect of any screen in England. This is obtained largely by using massive vertical bars for the piers, which are unusually severe, with solid caps and bases, and limiting and concentrating the scrollwork with telling effect. It was probably erected after 1723, when plans and elevations for the contemplated mansion were engraved. The design betrays French influence, but further research will, I believe, disclose more facts.

By analogy and inference many of the most scholarly and best designed gates in and around London would be assigned to Robinson. Among them the gates now at Devonshire House, which our valued friend, Mr. Phené Spiers, has traced back to Lord Heathfield's house at Turnham Green, probably not their original site, whence they were brought in the last century to Chiswick, and quite recently to Piccadilly. There are gates at Clandon Park of the same make, the real history of which is lost in a tradition that they were brought from Naples. I am engaged in classifying and unravelling the history of the numerous gates still existing in London and its environs, now, alas, very rapidly disappearing! This is a difficult task, as appropriation of ideas has always been so easy in London that few distinguishing peculiarities can be relied on.

One rival to Robinson is a smith, presumably of London, who executed several magnificent works in and around Cambridge and elsewhere, with a sufficiently distinctive style.

The English School of Ironwork.

It does not appear so far that any English smiths were directly influenced by French work, except through Tijou, who had been the sole channel, and had introduced by his own example alone a taste for richly-worked wrought-iron into England. Entirely French at the outset, it was but natural that Tijou, who was a genius, should after twenty years of residence in England and of intercourse with English patrons and architects, bring it somewhat into line with English sentiment, which in the main is wholly different to the French. Those who had been immediately associated in his work followed his ideas and traditions, but these almost died out in a single generation. On the other hand, our smiths, who were onlookers, caught some of his enthusiasm and imbibed his ideas, but had to find out for themselves how to put them in execution. Embossing, to those who were brought up as smiths, was a difficult, tedious, and expensive process, and they therefore used it sparingly, their designs being modified to suit this condition. Thus was produced the English school of ironwork, of well-knitted, restrained, and graceful lines, combining a simple dignity and fitness which harmonised so admirably with the national temperament and general surroundings. The essentially English treatment may be described as refined, and never approaching the commonplace or vulgar.

We were, however, at all times of our history open to receive French fashions and impulses, and ironworking was not altogether exempt. Architecture certainly borrowed much from France, but Gibbs's book of architecture, published in 1728, is the first book by an English architect which includes designs for ironwork. Two plates are devoted to forecourt screens

and one to gates. The forecourt for country mansions, however, had become almost a thing of the past before the book was published, and apparently none of the designs were ever executed. The designs appear to be adapted from the French, particularly from the grilles and gates to the front of Versailles, and are evidently subject to some definite and unexplained rules of proportion, for though variety is obviously aimed at, either design might be chosen indifferently, for all produce the same effect. The details are not all actually different from those then in use by our smiths, but purely French details are recognised in the railing with pike-heads and tassels, and the borders of small circles, of which we have seen so much in our London park gates of late. Massive cast baluster standards are also introduced, like those of the railings to St. Martin's-in-the-Fields.

The grand forecourt to Wentworth Castle, built about 1715, with its wide and stately bowed front, also presents a similar sweep of railings to that of Versailles, with lofty gates and wickets in the French taste. These are of long, vertical bars, with the lock-rail low down, under a rich overthrow, horizontally treated, with a pyramid scrolled top comprising the fully displayed arms and supporters of Thomas Wentworth, Earl of Strafford. Many other details suggest French design.

Powis House, in Great Ormond-street, was burnt in 1712, while occupied by the French ambassador, and rebuilt in a sumptuous manner by Louis XIV., who defrayed the cost, though the building was insured. The ironwork is of the utmost richness, and was probably renewed by order of Louis XIV. It is less distinctly French than that to Wentworth, but the fleur-de-lis terminals to the scrolled pyramid tops of the railings, and the magnificent scroll-work buttresses to the gates, etc., are unmistakably foreign. The gates to Newcastle House, in Lincoln's Inn, were also typically French. These have disappeared, and I believe the enclosure to the forecourt at Elvaston is really almost the only one actually of French make existing in England. It is said to have come from the Palace of Madrid, presumably the one near Paris, though I have failed to find any illustration of this château showing such an enclosure.

With the publication of Gibbs's book smithcraft seems to have waned. The few gates that are dated are plain and massive, like those to Gray's Inn and the Temple, and of about Gibbs's date. The grilles to the Mansion House and Bank of England are heavy and severe. The screen to the forecourt of the Horse Guards was probably designed by Vardy, though illustrated in Ware's "Body of Architecture" in 1756. Two or three guides for smiths published at about this time chiefly reproduced French designs. Batty Langley, in his "Ancient Masonry," took his bodily from a German, J. J. Schübler. Jores borrowed from Huquier, and the plates of the "Smith's Right Hand" are also taken chiefly from French sources. Few, if any, of their designs were ever carried out in England."

In concluding his remarks the lecturer said that the links between English and French work did not exist, and it seemed owing to Wren, who never took up with florid ironwork, that a more ornamental style did not appear before the advent of Tijou. It was perfectly clear that we might not have had a decorative school of ironwork in this country had it not been for Tijou, and whatever we might think about his designs, he was certainly a man who, considering the contemporary work of France, was in the very front rank, and the whole of his work was done in England. There was not the slightest trace of any work by him, or even of his name, either in France or Holland. He went to Holland as a refugee, and he must have been there a year or a year and a half before he arrived here; and there was no trace of his work anywhere but in England. He (the lecturer) had tried to find it, but he had failed, and he did not think it existed. It was a remarkable fact that a man who arrived in England in 1689 with the Prince and Princess of Orange, apparently with no workmen, should come here on "spec," so to speak, and within a year or two should have executed so large a quantity of work, and within two years should have made the splendid garden screen. How he managed to find men sufficiently good at smithing to help him one could not imagine, for there had been no work produced suggesting that there were smiths about who could have helped him in the work he did. Therefore he thought they would feel as he did, that to have put up the statue representing iron-working on the frieze of the Victoria and Albert Museum to a man who possibly was not even a smith was most unreasonable. The only record there was which said he was a smith was put up in the last century, long after there was any possibility of proving or disproving it. The monument to Huntingdon Shaw was erected outside the church at Hampton by the Queen's mason at his own expense. The church was burnt, and the part saved of the monument was the oval tablet which had room left on it for an inscription to the widow, as it was thought she would be buried there. It was not filled up till long after, and the lines added were: "He made and designed the ironwork for Hampton Court." Search had been made everywhere by the Board of Education, but Huntingdon Shaw's name was not mentioned anywhere in connexion with smiths' work.

The lecturer then showed a number of lantern views of ironwork.

Mr. Matt Garbutt, in proposing a vote of thanks to the lecturer, said that what had been said showed how little encouragement the smiths who did the work they had seen on the screen received. This had always been common in this country, and to some extent in others, although abroad he thought there was much better appreciation of good artistic work of every sort than here. Many of the examples shown them that evening were of work which was by no means blacksmithing, and that was the case with nearly all the work of Tijou. One seldom got, in the period under consideration, a piece of pure blacksmithing at all, a fact to which his attention was drawn some years ago by the criticism of a blacksmith, who said of a piece of our regular English work of the XVIIIth century, "Oh, that's not blacksmithing, that's joiner's work!" That is to say, it was not work done on the anvil and welded together, but was partly cut from cold bars and mortised together very much as the joiner would treat timber. The smiths were rather sticklers for accuracy in applying the word "blacksmithing" only to work done on the anvil, as opposed to fitters' work or "joiners' work." Embossing, or sheet work, was a conspicuous characteristic of French ironwork, and of such of the English ironwork as was derived from the French. When one looked at the mass of work done under the name of Tijou it was quite clear that he could not have had a personal hand in the making of much of it. It represented work for many men for years, and Tijou must have had men under him who could correct some of the grosser errors of his designs, and who knew something more about practical smithing than his book would lead us to think Tijou himself knew. He thought the tendency of the English school as it went on was towards improvement. In the majority of cases where ironwork was shown out of doors hardly anything told but the silhouette of it, and the details of embossing were not seen unless one went up to the work and looked at it carefully. With inside work it was different. In park gates and similar works it was only the outline that really told, and in many of the views they had seen there were little blocks of plate-work which were probably put in by the smith rather against his conscience, to hold a coat of arms perhaps. He was against the use of plate-work in screens out of doors because it was thinner than the bars and would soon give way to rust. It was not blacksmithing, and it was rather out of place, and in his opinion it should be kept for interiors. A comparison between English and Continental ironwork might be made as to peculiarities and methods of workmanship, and it would be interesting if Mr. Gardner would compare for them the actual methods of work and the means by which effects were arrived at. They saw at their last meeting some ironwork from Orta in Italy, consisting of a collection of flat-bars gathered up into a bunch, each bar as it receded from its root being twisted into scrollwork independently. Many beautiful screens were made in that way, typically Italian, of bent bars, plain collars, and a few stamped rosettes. Very few welds were in those screens, which were technically far simpler than the heavy forged bar-work done in France and made a foundation for plate-work. The majority of the work which one recognised as the usual English thing at Chelsea and elsewhere had a great deal of that cold fitting in it which meant another class of work altogether. As to the great gates at the Louvre, the filling in seemed to be nearly all work of the fitter's class, polished, etc. Pure blacksmithing—the product of welding and hot forging on the anvil—involved a great deal of simplicity and the highest skill. Perhaps the best example of what the smith could do was the "watered" sword blade made by repeated weldings of layer on layer; in a fine one there is perfect beauty of design, form, and fitness, combined with perfection of mechanical execution. It was elaborate and costly work, but it was the perfection of blacksmithing.

Mr. Maxwell Ayrton, who seconded the vote of thanks, said he was in agreement with what Mr. Garbutt had said as to the earlier work, and he would very much like to hear Mr. Gardner speak about the XIVth, XVth, and XVIth century work. It seemed to him that though later work could claim dexterity in handling, and certainly very much more strict architectural treatment in design, they lost a good deal of the simple directness of the earlier work which compelled admiration from the wonderful way in which richness and ornamentation were obtained while keeping within the confined limits of the material—limits not acknowledged in the later periods. It would be difficult to find more beautiful work than some of the XIVth and XVth century Spanish ornament on the locks, hinges, and latches of the period. The effects were invariably obtained by strictly legitimate smith's work. Mr. Gardner had said that at the beginning of the XVIIth century these smiths in Germany and Spain were indulging in *tours de force*, and in France there was a revival started which was wholly unrestrained by tradition and rules—both signs of decadence in art, and the smiths were striving after effects which were hardly suitable to the harsh material they were dealing with. That could, he thought, be proved by the return at a later date to work of a simpler character.

Mr. Gerald Horsley said that what occurred to him as a point of some importance was that the ironwork which the lecturer described as beginning with Tijou only lasted for about two generations. Tijou was succeeded by Robinson, Edwards, and Bakewell, and others, and after that they got to a date about 1728 when Gibbs' book was published, and then the great school of ornamental ironwork seemed to have died out, and no more large gates and railings were put up in gardens and parks and ironwork became of a simpler character, such as small entrance gates and screens—very beautiful, no doubt, but simpler and

less architectural. That was significant, because in France it was not so; the ironwork there proceeded along with the architecture, as it did to this day. If one followed the course of architecture from the time of Tijou from about 1660 to this time, one noticed in the gates of the Palais de Justice, which were done at the time of Louis Seize about 1770, and in the fine ironwork to the gates at Nancy, which was done earlier, —all of the period from Louis Quatorze to Louis Seize—that there was fine ironwork, which was closely allied to the architecture done at the time. That appeared to be the great difference between our English ironwork, charming and beautiful as it was, and the French, and he thought that must arise from the fact that we in England had never had the advantages which the French had had. In the XVIIth century Louis XIV. founded his school for architects, who evidently influenced the design of the ironwork of their time, while we in England at a later date were dependent on a Frenchman for our development of ironwork, who did not seem to impress even Sir Christopher Wren. That perhaps may have been because Wren may not have had so much money to spend on his work as he would have liked; and in any case it was owing to the fact that we had not a king in England who did for architecture what Louis XIV. did for French architecture, and accordingly our English ironwork had suffered from a want of support which was given to the craft in France.

The Chairman, in putting the vote of thanks to the meeting, said he thought that Mr. Garbutt had made a strong point about smith's work; but was it necessary that ironwork should be absolutely smith's work in order to be good? It would be interesting if they could have a similar paper from Mr. Gardner on the comparison with Spanish ironwork, and there was a lot of charming Spanish work in windows and balconies. As to Tijou and Huntingdon Shaw, was it not possible that Shaw really was the blacksmith and that Tijou was the designer and that they worked in unison?

The vote of thanks having been heartily agreed to,

Mr. Gardner, in reply, said the subject of smithing was a vast one, and could not be got into one lecture. He thought it best to confine it to one phase rather than go back to mediæval times, for the French influence was great, and the same designs were in both countries, and except in the extreme south of France there was no difference between the French and English work—or very little; the French spent more money than we did, that was all. But it was totally different in the case of Germany, Italy, and Spain, and one did not find the slightest suggestion of any community of idea between the ironwork of those countries and that in England; we borrowed nothing from them, nor did they from us. Of smithing done on the anvil while the iron was hot, no finer work was ever carried out than the German Renaissance work, when the craftsman seemed to go mad in introducing difficulties in order to overcome them, and each man seemed to go one better than his neighbour. There were grilles with hundreds of interlacings, each one requiring a separate welding. The Low Countries, when they got rich, took up ironwork with the greatest ardour, and they did massive forgings of an heroic kind. And so again in Spain, there being a close relationship between the two countries. The dependence of one on the grandeur of the other led the Spaniards to make their church grilles; and these grilles gradually assumed great dimensions until they were 90 ft. high, with enormous massive forgings several inches in diameter, all done on the anvil by hand. It was not our custom, and we have nothing like it here; the largest forgings he knew of in England were the pillars supporting the gallery at Dartmouth Church, evidently done by anchor smiths, by men accustomed to deal with large masses of iron. All the ironwork of the time of Henry V. was what would be called joiner's work, and so with the later work. The character of ironwork was a matter of fashion; over elaboration resulted in an opposite tendency. If the smith had a long innings of elaborate grilles, people got tired and went back to geometric design, and the smith then had little to do with them, the fitter being employed. Over elaboration, resulting in over severity, had been the curse of smithing, and one almost saw that at the present time. Very little smithing was being done in present-day balconies, which were very geometric again.

The Chairman announced that the next meeting would be held on February 4, when Mr. W. H. Ward would read a paper on "Renaissance Church Architecture in France During the XVIth Century."

The meeting then terminated.

THE SOCIETY OF ARCHITECTS:

THE MEASUREMENT OF ILLUMINATION.

A MEETING of the Society of Architects was held on Thursday last week at the premises, at Staple Inn-buildings (South), W.C., Mr. J. W. Dyson, Vice-President, in the chair, in the absence of the President, Mr. G. Bond, J.P., when Mr. P. J. Waldram, F.S.I., read a paper entitled "The Measurement of Illumination—Daylight and Artificial, with Special Reference to Ancient Light Disputes."

The lecturer said it was difficult to imagine any building where the decisions of the designer with regard to the shape and size of windows and the provision of artificial illuminants were not of the utmost importance. At the same time rooms which were built with an unduly large proportion of window space could only be warmed in winter with difficulty and at great expense, whilst in summer they were insufferably hot. Even greater care had to be exercised in order to avoid excessive artificial lighting, which was not only expensive, but extremely detrimental to the eyesight. The human eye, which would readily adapt itself to very large variations of diffused sunlight, was extremely sensitive with regard to artificial illumination, and would be strained and injured by anything outside of a very limited range. What was the information possessed by the average architect upon the subject of windows? He knew that the window space of every room should be at least $\frac{1}{10}$th of the floor space, and he probably knew that the same proportion in schools should approximate to $\frac{1}{4}$th. But how many could say what proportion of the outside daylight was enjoyed in any room? How many could say what difference would be caused by any given degree of obstruction, or whether the height of the window had made any difference? How many could define the relative efficiencies of a square foot of glass in a wall and a square foot of glass in a skylight? How many could tell a client what would be the relative amount of light absorbed by or reflected from wallpapers of different colours, or by different kinds of glass? With regard to artificial light, many architects knew that a provision of thirty candle-power per square of 100 ft. super. of floor area was considered ordinary, that fifty candle-power per square gave bright, and sixty candle-power per square gave brilliant effects. But how many could say at what height from the floor the lights should be placed in order to give these effects, what would be the results at other heights, or what would be the effect of using frosted or tinted globes or shades, and whether the result would be the same with many lights or few?

The Building Act and local by-laws merely demanded a minimum porportion between window and floor area, irrespective of whether such windows were at the bottom of a deep area or overlooking a park. The Regulations of the Board of Education for new schools (1707) were excellent as far as they went, except that they forbid the most efficient possible window, viz., a ceiling light. But they did not go very far, and they were absolutely silent upon the subject of artificial lighting. Details for the approval of the Board were required of sanitary arrangements, ventilation, boundary walls, desks, fireplaces, etc., but artificial lighting was not even mentioned. The requirements of the Home Office with regard to the lighting of workshops was that it should be "adequate," which was, to say the least, a little indefinite. The reason for this state of surprising ignorance was not far to seek. Exact knowledge was impossible without measurements and standards; and the measurement of light had been unfortunately confined almost entirely to the measurement of the intensity of light sources, whilst the measurement of results, *i.e.*, the general illumination to be derived from arrangements of lamps, had been neglected. Hence we had ample data as to the candle-power of lamps, but no data at all of the illumination at table height which could be secured by using them. A few weeks ago the author asked three well-known electrical firms to tender for the wiring of a village hall on the basis of a given illumination at a certain height above the floor. The reply of each one was to the effect that having no data on illumination they were unable to tender. The effects of different tints of wallpaper on the eye were most extraordinary. Nearly everyone would be favourably impressed with the lighting of a room papered in light pink, and would be extremely liable to consider inadequate that of a room with light buff or pale grey walls. Yet the latter colours reflected nearly four times as much light as pink. Certain wallpapers meant a very considerable difference to one's bills for artificial light. How many people would hold up the Strand Law Courts as an example of daylight lighting? But try and read a piece of fine print at sunset in the witness-box or counsel's seat of any of the Courts, and afterwards try it at the same hour in the centre of an ordinary office with large windows; the difference was surprising. The chief reason for this was that the windows were high up in the walls, and the enormously high relative value of high angle light was a matter of which the eye took little notice, and which was seldom properly recognised. Its effect however could be easily studied by darkening different parts of any ordinary window with brown paper screens. The loss of the bottom 2 ft. or 3 ft. in height would hardly make any difference at all, but shutting off a few inches from the top might reduce the general illumination of a room by 30 per cent. so 50 per cent. It would sometimes be found that high rooms on lower floors with badly-restricted horizons were actually lighter than low rooms on upper floors with the same proportion of glass to floor area and with absolutely open horizons.

The daylight illumination of every room varied by several hundred per cent. from sunrise to noon and from noon to sunset; and it also varied from day to day and from month to month. But the adjustable iris diaphragm of the eye deliberately stopped down all illuminations which were above a common level of efficiency, so that the mind was quite unconscious of these large middle-day excesses of illumination, and might very well remain ignorant of them.

A very little consideration of these facts would show that unaided visual impressions were quite worthless as a criterion of the daylight illumination of any room, and how extremely unlikely it was that different experts, trusting to their eyes alone, would arrive at the same opinion.

Fortunately, however, the daylight illumination of interiors could be measured in spite of its constantly fluctuating character; because the proportion of the outside daylight which any room received was always a fixed ratio. As sky brilliancy increased and decreased, so did the interior illumination,

and in precisely the same proportion, except when the room was lit by the direct rays of the sun or directly reflected rays. If the middle of a room received $\frac{1}{1000}$th of the outside light at sunrise in December, it received $\frac{1}{1000}$th at noon in June. This proportion was also the same in a scale model of the room as in the room itself. All that was required was a photometer with a large adjustable range and which would record not candle-power but illumination in candle-feet, viz., degrees of illumination equivalent to so many standard candles at a distance of 1 ft.

The chief object of his paper was to show that the measurement both of artificial and daylight illumination was such a very simple matter, requiring neither special skill nor expensive apparatus, that it ought to be largely undertaken by architects. The photometry of lamps and other light sources demanded very delicate and expensive apparatus, specially constructed laboratories, and the exercise of technical and mathematical ability of no mean order. But the photometry of lamps was a matter for the engineer and not for the architect; he was concerned with the results, not the means. The photometry of illumination, both daylight and artificial, could be performed with instruments of about the same size, weight, and cost as a good hand camera, and demanded neither technical skill nor mathematical knowledge.

The principle of illumination photometers was to compare the illumination which fell upon a card outside the instrument with the light of a standard electric lamp inside, and viewed through a slot in same card. The light of the standard lamp was graduated by turning a milled head at the side of the instrument until the illumination of the slot was equal to that of the rest of the card. The same operation turned an index needle on a dial which automatically indicated the degree of illumination in the slot. The difficulty of balancing lights of different colours was in most instruments met by passing the light through a rapidly rotating sector. The resulting flicker was, however, not a little trying to the eyes, and the author preferred the well-known Preece-Trotter type, in which the difficulty was overcome by using slotted cards of different standard tints.

Having described a diagram illustrating the construction of the instrument, the author gave the following examples of inside and unrestricted outside illumination, *i.e.* :—

New Suburban Elementary Schools—Children's Desks	0·0025 to 0·008
New Urban Technical School—	
Classrooms, Ground Floor, average	0·001
Upper Floors	0·002 to 0·001
Ordinary Offices, Centre of Rooms, average	0·001
British Museum, Reading-room	0·007
" " Entrance Hall	0·0017
Patent Office Library, Centre of Reading-room	0·005
" " " Reading Alcoves and Galleries	0·0007 to 0·008
Royal Courts of Justice—Middle of Central Hall	0·0012
" " Courts—Judges' Seats, Counsel, Solicitors, Jury and Witnesses	0·0007 to 0·0022
House of Commons—Clerk's Table	0·0008
Speaker's Chair	0·0009
Behind ditto	0·0002
Members' Seats	0·0003 to 0·0007
House of Lords—Woolsack	0·0006
Members' Seats	0·0004 to 0·0006
Members' Lobby	0·001
Lords' Lobby	0·0004
Central Hall	0·0015
Committee Rooms (Centre)	0·004 to 0·005
Westminster Hall (Centre)	0·0012
Charing Cross Station, Booking Hall	0·0001 to 0·0003
Surveyors' Institution, Centre of Library	0·0015

In cases where the obstruction of the visible horizon had already taken place the proportion of light still remaining could be compared with that of other rooms in the neighbourhood; but the more customary problem was to estimate the future damage of a proposed obstruction. This could be ascertained in three ways:—

(1) By erecting the proposed obstruction in the form of temporary screens and noting their effect on the percentage of light enjoyed.

(2) By reproducing the room and its aspect in a scale model and similarly noting the effect.

(3) By deducing the damage from known and recognised data of the difference caused by any given degree of obstruction.

The first two methods were comparatively simple, and they were the only ways open to us at the present time; but if we only had the data referred to in (3) the trouble, anxiety, and needless expense of ancient light disputes might be avoided altogether, and at the same time one of the greatest difficulties connected with town building would become a matter of simple calculation.

Finally, we had to consider what was the real effect of any given obstruction. Over the greater part of the working day it was negligible, for if a room be lit at all at sunrise and sunset, then it had a very large excess between those hours. It might suffer æsthetically, and in rental value, from loss of prospect; but prospect was not an easement.

The real loss, as regards reading, writing, and industrial occupations, was that more artificial light would be required in the morning and evening. The extent of this loss could only be exactly arrived at if the average of increase and decrease of outside daylight be known. There was needs for exact and authoritative data, but approximately this might be put at a rise or fall of about 1,000 candle-feet in forty-five minutes on clear days in June, and in 180 minutes in average weather in December. In other words, at a point in a room enjoying $\frac{1}{1000}$th of the outside light the illumination would increase and diminish at the average rate throughout the year of about 1 candle-foot per 120 minutes. But a room only enjoying half that proportion would require twice as long to acquire a working light in the morning, and would lose it so much sooner in the evening.

A rough approximation of a standard well-lit room would be one enjoying an average of 1 candle-foot (*i.e.*, a fair reading light) at half an hour after sunrise and at sunset on a clear day, which was given by a proportion of about $\frac{1}{1000}$th of the outside illumination.

The great present-day need was that architects should take an active and intelligent interest in illumination. They could at least insist that gas and electric sub-contractors should guarantee a given illumination at table height in candle-feet. The demand would soon create the supply, and instruments for testing the results were neither expensive nor difficult to use. But, above all, we needed workers who would record data and results. Architects, and architects alone, could do this satisfactorily, and their labours would benefit not only their own profession, but the whole of the working community.

In the discussion which followed, Mr. A. P. Trotter said the subject had been a hobby of his for the last sixteen years, and the outcome of his investigations into the measurement of illumination had been the instrument which he had brought before them. It had been one of his endeavours to prepare a daylight curve, such as the one the lecturer had shown, in order to arrive at the co-efficients of different buildings, but he had been unable to proceed with the matter. He thought the short table given by Mr. Waldram as to the illumination received by the interiors of public buildings, was a very useful one, which should be considerably extended, as in his opinion it would appeal more to people to be able to ask for their interiors to be lit three-quarters as well as the British Museum reading-room, or as well as this or that building, than to have to stipulate for so many foot-candles.

Mr. Leon Gaster said that the illumination of rooms should be thought out and arranged for a definite purpose. In a museum, for instance, if the light received by a room came from above, the figures in the room cast unsatisfactory shadows; while if from below, things did not look proper. It was very important that the question of illumination should be thoroughly thought out during the planning stage. Workers were wanted to collect data for comparison in regard to different buildings and to show how far instruments were accurate. He should like to see the subject of illumination form part of the curriculum of architectural schools, as from a better acquaintance with it the architect and illuminating engineer would work in greater harmony.

The discussion was continued by Messrs. G. A. Birkenhead (Cardiff), who proposed a vote of thanks to the lecturer, C. E. Jackson (London), R. G. Bare (London), T. Lidiard James (London), J. Todd, A. Alban Scott (London), and the Chairman.

The motion having been heartily agreed to,

Mr. Waldram, in reply, said that since the Colls case the Courts had turned more to opinion than to fact, as the experts on one side flatly contradicted the experts on the other. There was not one electrical wiring contractor in a hundred who could tell in exact terms what illumination a given object would receive. He did not suggest that architects should go, as a profession, into the very intricate calculations for lighting, but they ought to ask the experts to give them a certain result, and be in a position to see that they got it. It was well to diffuse artificial light as much as possible; too often it was concentrated too much. In factories it should be the particular care of the architect to see that light walls and ceilings were provided. As to the amount of light reflected by white glazed brickwork, in many cases the light of a room had been increased by an obstruction owing to a white reflecting surface. More light could be obtained by the use of a reflecting surface than could be got through a low angle window. If rooms were properly proportioned, the angle of 45° could be largely exceeded without interfering with the light of a room to any material extent, and it was not until they got an obstruction of 60° that any interference with the light was manifested. Forty-five degrees ought not to be regarded as an obstruction at all; it might reduce the prospect and the rental value, but it was not an actionable obstruction. In answer to a query, he did not think that a skylight could be obstructed. The illumination of a building should be part of the general scheme of an architect in planning his building, and he should make his rooms of such heights as would permit of a certain proportion of the outside illumination entering. Architects should specify the result they desired and leave the means in the hands of the contractor. The demand would soon create the supply.

The proceedings then concluded.

WESTMINSTER CITY COUNCIL.

At a sitting of the Westminster City Council on Thursday, January 13, a motion was brought forward to promote a Bill next session with the object of extinguishing the right of user of the rector of St. James in respect of the St. James's Hall. By the Bill it is proposed to authorise the rector to use the money paid by the City Council in the erection of a mission hall or church-house on part of the graveyard.

Mr. Summers Cox, in proposing the resolution, said the building proposed to be acquired was erected in 1813. It was proposed to pay the rector 2,000*l.* for the extinguishment of the rights.

Alderman Coleman seconded the motion.

Mr. Glanville Smith opposed the motion, and complained that no particulars were given as to the quantity of land which would be taken for building.

After some discussion further consideration was postponed.

A DECEASED ARCHITECT'S ESTATE.—The estate of the late Mr. Thomas Worthington, F.R.I.B.A., formerly Vice-President of the Royal Institute of British Architects, and President of the Manchester Society of Architects and of the Royal Manchester Institute, who died on November 9, aged 83, has been valued at 13,907*l.* gross, with net personalty 13,747*l.*

THE BUILDER

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MEETINGS.

FRIDAY, JANUARY 21.

Institution of Mechanical Engineers.—Paper to be read and discussed, "Ninth Report to the Alloys Research Committee: on the Properties of some Alloys of Copper, Aluminium, and Manganese," with an Appendix on the Corrosion of Alloys of Copper and Aluminium when Exposed to the Sea, by Dr. W. Rosenhain and Mr. F. C. A. H. Lantsberry, of the National Physical Laboratory, Teddington. 8 p.m.

London County Council Central School of Arts and Crafts, Southampton-row, W.C. (Free Lectures on Historic Arts and Crafts).—Mr. A. F. Kendrick on "Embroideries"—I. 6 p.m.

SATURDAY, JANUARY 22.

The Builders' Foremen's Association.—Sixteenth annual dinner, King's Hall, Holborn Restaurant. 6.30 p.m.

Junior Institution of Engineers.—Visit to the new generating-station of the Westminster Electric Supply Corporation, Horseferry-road, Westminster. 3 p.m.

Aberdeen Architectural Association.—Mr. Alex. M'Gibbon on "Architectural Forms not Influenced by Material: a Popular Opinion Controverted." Illustrated. 7.30 p.m.

MONDAY, JANUARY 24.

Surveyors' Institution.—The adjourned discussion on Mr. Davidge's paper, "Town Planning Systems," and Mr. John Willmot's paper on "The Housing, Town Planning, etc., Act, 1909." 8 p.m.

Liverpool Architectural Society.—Mr. E. Rathbone on "The City Beautiful; or Liverpool Compared with Cities Old and Modern." Lantern slides. 6 p.m.

Royal Society of Arts (Cantor Lecture).—Mr. Alan S. Cole, C.B., on "Textile Ornamentation"—II. 8 p.m.

TUESDAY, JANUARY 25.

University Extension Lectures (British Museum).—Lecture on "Ancient Architecture," by Mr. Banister Fletcher.—XVI. "The Roman Therma." 4.30 p.m.

Institution of Civil Engineers.—Mr. I. C. Barling, M.Inst.C.E., on "The Reconstruction of the Tyne North Pier." 8 p.m.

WEDNESDAY, JANUARY 26.

Carpenters' Hall, London-wall (Free Lectures on Arts Connected with Building).—Mr. Banister F. Fletcher on "The Carpenter's Craft." 7.30 p.m.

Royal Society of Arts.—Mr. Omar Ramsden on "Goldsmiths' and Silversmiths' Work." 8 p.m.

THURSDAY, JANUARY 27.

Architectural Association Camera and Sketching Club.—Annual general meeting. 7.30 p.m.

Institution of Electrical Engineers.—Mr. H. E. Yerbury on "Equitable Charges for Tramway Supply." 8 p.m.

FRIDAY, JANUARY 28.

Architectural Association Debating Society.—Messrs. W. G. B. Lewis and A. E. Bullock on "Church Architecture—Gothic v. Classic." 7.30 p.m.

London County Council Central School of Arts and Crafts (Lectures on Historic Arts and Crafts).—Mr. A. F. Kendrick on "Embroideries"—II. 6 p.m.

Glasgow Architectural Craftsmen's Society Technical College.—Mr. John Shanks on "Impressions of the White City." Illustrated. 8 p.m.

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SATURDAY, JANUARY 29.

The Architectural Association.—Second Spring visit.

Fifty Years Ago.

FROM THE *Builder* OF JANUARY 21, 1860.

THE PROGRESS OF THE ELECTRIC TELEGRAPH.

IN various parts of London, high above the busy thoroughfare, numerous workmen are busily employed in passing the electric wires from one situation to another. These will ere long form a curious and striking feature of the streets of the metropolis. Every week this means of communicating information is being more adopted; and, as we have before said, the electric telegraph will prove a means of increasing the power of the police, of spreading the alarm of fire, and important for many purposes of business. It is not unlikely that the laying on of the telegraph in important establishments, printing offices, etc., will become as necessary as in the case of gaslight and water. Who can say how ultimately this marvellous invention may affect our present post-office system, or to what extent the streets overhead may be covered with wires, like a spider's web? It may be, in business, that the art of working the telegraph may be as necessary as that of writing, and be made a matter of school education; and that tall chimneys and other lofty objects will have a value which is at present not thought of.

COUNTRY HOUSE IN NORFOLK.

ACTIVE preparations for the building of this house were proceeding when the Budget gave the building-owner pause, and if the framers of this measure are returned to power it will not be built.

The site is 23 acres on the shoulder of Norfolk. The plateau on which the house would stand is contiguous to a highway and falls sharply to the south, commanding fine views to the south-east, through south to south-west. Hence the plan. The buildings would have mottled red brick facings, rubbed facing arches and long and short work, and Ketton stone sparingly used. The roofs would be covered with deep orange-red hand-made tiles, lead gutters, etc. The house would be lighted by electricity by duplicate oil-engines housed some distance from main buildings. The building-owner, being a skilled mechanic, proposes personally carrying out minor repairs to his cars, and for this purpose overhead gearing is installed in motor-house for lifting engines, and this and the lathes in both workshops could be driven by electric motors. Special arrangements are made to dispense with motor pits, and the chauffeur's rooms are entirely isolated. The courtyards would be paved by York stone and the terraces, gardens, etc., carried out to the architect's designs. J. W. RHODES.

Illustrations.

STATIONERS' HALL.

THE earliest mention of the fraternity of "stationers" in the City of London seems to be that made in 1403. The present Company has for long been distinguished as the only one which, in modern times, has been restricted to traders in the mystery and craft.

On June 10, 1903, the Stationers' Company celebrated the 500th anniversary of their foundation as a guild of booksellers with a hall in Milk-street, Cheapside. In 1553 they migrated to St. Peter's College (near the present Deanery House of St. Paul's), which had been the home or hostel of the cathedral chantry priests. Having received a charter of incorporation dated May 4, 1557, from Queen Mary I., they again removed, *temp.* James I., to Bergavenny House, by Ludgate-hill, which belonged to Henry Nevill, fourth Lord Bergavenny, in Queen Elizabeth's reign, and had been the "inn" of the Earls of Pembroke, and, *temp.* Edward II., of John, Earl of Richmond and Duke of Bretagne. In Hansard's "Typographia" is a view of Bergavenny House, as altered for the Stationers, from the original block cut for the Company. In the old house, consumed by the Great Fire, were a portrait and memorial window of John Reynes, the famous printer, who traded in 1527-44 at the sign of St. George in St. Paul's churchyard. The Hall, rebuilt after the Fire, was fitted, 1674, by Stephen Colledge, the famous joiner, "with well-seasoned and well-matched wainscot according to a model delivered in, for the sum of 300*l.*"; the woodwork has remained in good state to our time.

The east front, in stone, of the hall in Stationers' Hall-court was added in 1800 by Robert Mylne, the architect, and surveyor to the Company; his grandson, Mr. Robert W. Mylne, also surveyor to the Company, added the northern block for the copyright registry, board-room, warehouses, and the beadle's and other offices, built in 1886-7, by the late B. E. Nightingale, contractor, of Portland stone and white Suffolk brick, as portion of the Company's scheme for their new buildings in Amen-corner and Ave Maria-lane. On March 30, 1889, we published an illustration of the Shakespeare window executed by Messrs. Mayer & Co., after a design by the donor, Mr. Joshua W. Butterworth, F.S.A., Master, who for the features of the poet followed the Chandos portrait. In 1886-7 Mr. Edmund Waller presented a large one-light stained glass window of St. Cecilia, and one of Tyndale. In July, 1894, was unveiled the Caxton window, embodying representations of a contemporary printing-press and the Company's state barge, given by the then Master and Mr. Butterworth, to replace the coloured glass, by Edgington, in the north end of the hall, which had fallen into decay; those windows were all executed by Messrs. Mayer & Co. In the Hall are preserved a bust of William Bowyer, the printer, and a munificent benefactor to the Company's charities; and portraits of John Bunyan; Samuel Richardson and his wife, by Highmore; Robert Nelson, by Kneller; Dr. Hoadley, Bishop of Bangor; Steele and Prior (given by John Nichols); William and Andrew Strahan, King's Printers and benefactors; Alderman Boydell (by Graham), who presented the picture, painted by Benjamin West, P.R.A., of King Alfred sharing a loaf with the pilgrim, St. Cuthbert; and Vincent Wing, the astrologer (1668). Stationers' Hall served in the XVIth and XVIIth centuries for holding obsequies; the funeral banquet for Thomas Sutton, founder of Charterhouse, was given there on May 28, 1612. In 1683 the Musical Society began their St. Cecilia Festivals, on November 22, which for a while consisted of a service generally in St. Bride's, Fleet-street (for which Purcell composed his Jubilate and Te Deum in D), followed, until 1703, with a midday feast in the Hall and the singing of an ode in honour of St. Cecilia. Dryden, Pope, Addison, Congreve, and Shadwell rank amongst the writers of the odes, set to music by Blow, Purcell, Boyce, Greene, Clark, Draghi, Wesley, Parry, and other famous composers.

The interior which we illustrate is a good example of its date. The screen forms the main architectural feature, and its effect is undoubtedly fine. The central doorway is rather too wide, perhaps. We have omitted the modern electroliers, as their design is not at all in keeping with that of the Hall.

and in precisely the same proportion, except when the room was lit by the direct rays of the sun or directly reflected rays. If the middle of a room received $\frac{1}{1000}$th of the outside light at sunrise in December, it received $\frac{1}{1000}$th at noon in June. This proportion was also the same in a scale model of the room as in the room itself. All that was required was a photometer with a large adjustable range and which would record not candle-power but illumination in candle-feet, viz., degrees of illumination equivalent to so many standard candles at a distance of 1 ft.

The chief object of his paper was to show that the measurement both of artificial and daylight illumination was such a very simple matter, requiring neither special skill nor expensive apparatus, that it ought to be largely undertaken by architects. The photometry of lamps and other light sources demanded very delicate and expensive apparatus, specially constructed laboratories, and the exercise of technical and mathematical ability of no mean order. But the photometry of lamps was a matter for the engineer and not for the architect; he was concerned with the results, not the means. The photometry of illumination, both daylight and artificial, could be performed with instruments of about the same size, weight, and cost as a good hand camera, and demanded neither technical skill nor mathematical knowledge.

The principle of illumination photometers was to compare the illumination which fell upon a card outside the instrument with the light of a standard electric lamp inside, and viewed through a slot in same card. The light of the standard lamp was graduated by turning a milled head at the side of the instrument until the illumination of the slot was equal to that of the rest of the card. The same operation turned an index needle on a dial which automatically indicated the degree of illumination in the slot. The difficulty of balancing lights of different colours was in most instruments met by passing the light through a rapidly rotating sector. The resulting flicker was, however, not a little trying to the eyes, and the author preferred the well-known Preece-Trotter type, in which the difficulty was overcome by using slotted cards of different standard tints.

Having described a diagram illustrating the construction of the instrument, the author gave the following examples of inside and unrestricted outside illumination, *i.e.* :—

New Suburban Elementary Schools—	
Children's Desks	0·0025 to 0·008
New Urban Technical School—	
Classrooms, Ground Floor, average	0·001
Upper Floors	0·002 to 0·004
Ordinary Offices, Centre of Rooms, average	0·001
British Museum, Reading-room	0·007
" " Entrance Hall	0·0017
Patent Office Library, Centre of Reading-room	0·005
" " " Reading Alcoves and Galleries	0·0007 to 0·008
Royal Courts of Justice—Middle of Central Hall	0·0012
" " Courts—Judges' Seats	0·0007 to 0·0022
" Counsel	
Solicitors	
Jury and Witnesses	
House of Commons—Clerk's Table	0·0008
Speaker's Chair	0·0009
Behind ditto	0·0002
Members' Seats	0·0003 to 0·0007
House of Lords—Woolsack	0·0006
Members' Seats	0·0004 to 0·0006
Members' Lobby	0·001
Lords' Lobby	0·0004
Central Hall	0·0015
Committee Rooms (Centre)	0·004 to 0·005
Westminster Hall (Centre)	0·0012
Charing Cross Station, Booking Hall	0·0001 to 0·0003
Surveyors' Institution, Centre of Library	0·0015

In cases where the obstruction of the visible horizon had already taken place the proportion of light still remaining could be compared with that of other rooms in the neighbourhood; but the more customary problem was to estimate the future damage of a proposed obstruction. This could be ascertained in three ways:—

(1) By erecting the proposed obstruction in the form of temporary screens and noting their effect on the percentage of light enjoyed.

(2) By reproducing the room and its aspect in a scale model and similarly noting the effect.

(3) By deducing the damage from known and recognised data of the difference caused by any given degree of obstruction.

The first two methods were comparatively simple, and they were the only ways open to us at the present time; but if we only had the data referred to in (3) the trouble, anxiety, and needless expense of ancient light disputes might be avoided altogether, and at the same time one of the greatest difficulties connected with town building would become a matter of simple calculation.

Finally, we had to consider what was the real effect of any given obstruction. Over the greater part of the working day it was negligible, for if a room be lit at all at sunrise and sunset, then it had a very large excess between those hours. It might suffer æsthetically, and in rental value, from loss of prospect; but prospect was not an easement.

The real loss, as regards reading, writing, and industrial occupations, was that more artificial light would be required in the morning and evening. The extent of this loss could only be exactly arrived at if the average of increase and decrease of outside daylight be known. There was needs for exact and authoritative data, but approximately this might be put at a rise or fall of about 1,000 candle-feet in forty-five minutes on clear days in June, and in 180 minutes in average weather in December. In other words, at a point in a room enjoying $\frac{1}{1000}$th of the outside light the illumination would increase and diminish at the average rate throughout the year of about 1 candle-foot per 120 minutes. But a room only enjoying half that proportion would require twice as long to acquire a working light in the morning, and would lose it so much sooner in the evening.

A rough approximation of a standard well-lit room would be one enjoying an average of 1 candle-foot (*i.e.*, a fair reading light) at half an hour after sunrise and at sunset on a clear day, which was given by a proportion of about $\frac{1}{1000}$th of the outside illumination.

The great present-day need was that architects should take an active and intelligent interest in illumination. They could at least insist that gas and electric sub-contractors should guarantee a given illumination at table height in candle-feet. The demand would soon create the supply, and instruments for testing the results were neither expensive nor difficult to use. But, above all, we needed workers who would record data and results. Architects, and architects alone, could do this satisfactorily, and their labours would benefit not only their own profession, but the whole of the working community.

In the discussion which followed, Mr. A. P. Trotter said the subject had been a hobby of his for the last sixteen years, and the outcome of his investigations into the measurement of illumination had been the instrument which he had brought before them. It had been one of his endeavours to prepare a daylight curve, such as the one the lecturer had shown, in order to arrive at the co-efficients of different buildings, but he had been unable to proceed with the matter. He thought the short table given by Mr. Waldram as to the illumination received by the interiors of public buildings, was a very useful one, which should be considerably extended, as in his opinion it would appeal more to people to be able to ask for their interiors to be lit three-quarters as well as the British Museum reading-room, or as well as this or that building, than to have to stipulate for so many foot-candles.

Mr. Leon Gaster said that the illumination of rooms should be thought out and arranged for a definite purpose. In a museum, for instance, if the light received by a room came from above, the figures in the room cast unsatisfactory shadows; while if from below, things did not look proper. It was very important that the question of illumination should be thoroughly thought out during the planning stage. Workers were wanted to collect data for comparison in regard to different buildings and to show how far instruments were accurate. He should like to see the subject of illumination form part of the curriculum of architectural schools, as from a better acquaintance with it the architect and illuminating engineer would work in greater harmony.

The discussion was continued by Messrs. G. A. Birkenhead (Cardiff), who proposed a vote of thanks to the lecturer, C. E. Jackson (London), R. G. Bare (London), T. Lidiard James (London), J. Todd, A. Alban Scott (London), and the Chairman.

The motion having been heartily agreed to,

Mr. Waldram, in reply, said that since the Colls case the Courts had turned more to opinion than to fact, as the experts on one side flatly contradicted the experts on the other. There was not one electrical wiring contractor in a hundred who could tell in exact terms what illumination a given object would receive. He did not suggest that architects should go, as a profession, into the very intricate calculations for lighting, but they ought to ask the experts to give them a certain result, and be in a position to see that they got it. It was well to diffuse artificial light as much as possible; too often it was concentrated too much. In factories it should be the particular care of the architect to see that light walls and ceilings were provided. As to the amount of light reflected by white glazed brickwork, in many cases the light of a room had been increased by an obstruction owing to a white reflecting surface. More light could be obtained by the use of a reflecting surface than could be got through a low angle window. If rooms were properly proportioned, the angle of 45° could be largely exceeded without interfering with the light of a room to any material extent, and it was not until they got an obstruction of 60° that any interference with the light was manifested. Forty-five degrees ought not to be regarded as an obstruction at all; it might reduce the prospect and the rental value, but it was not an actionable obstruction. In answer to a query, he did not think that a skylight could be obstructed. The illumination of a building should be part of the general scheme of an architect in planning his building, and he should make his rooms of such heights as would permit of a certain proportion of the outside illumination entering. Architects should specify the result they desired and leave the means in the hands of the contractor. The demand would soon create the supply.

The proceedings then concluded.

WESTMINSTER CITY COUNCIL.

At a sitting of the Westminster City Council on Thursday, January 13, a motion was brought forward to promote a Bill next session with the object of extinguishing the right of user of the rector of St. James in respect of the St. James's Hall. By the Bill it is proposed to authorise the rector to use the money paid by the City Council in the erection of a mission hall or church-house on part of the graveyard.

Mr. Summers Cox, in proposing the resolution, said the building proposed to be acquired was erected in 1813. It was proposed to pay the rector 2,000*l.* for the extinguishment of the rights.

Alderman Coleman seconded the motion.

Mr. Glanville Smith opposed the motion, and complained that no particulars were given as to the quantity of land which would be taken for building.

After some discussion further consideration was postponed.

A DECEASED ARCHITECT'S ESTATE.—The estate of the late Mr. Thomas Worthington, F.R.I.B.A., formerly Vice-President of the Royal Institute of British Architects, and President of the Manchester Society of Architects and of the Royal Manchester Institute, who died on November 9, aged 83, has been valued at 13,907*l.* gross, with net personalty 13,747*l.*

THE BUILDER

JANUARY 22, 1910.

TO CORRESPONDENTS.

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All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

TERMS OF SUBSCRIPTION.

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Remittances (payable to J. MORGAN) should be addressed to The Publisher of "THE BUILDER," 4, Catherine-street, W.C.

MEETINGS.

FRIDAY, JANUARY 21.

Institution of Mechanical Engineers.—Paper to be read and discussed, "Ninth Report to the Alloys Research Committee: on the Properties of some Alloys of Copper, Aluminium, and Manganese," with an Appendix on the Corrosion of Alloys of Copper and Aluminium when Exposed to the Sea, by Dr. W. Rosenhain and Mr. F. C. A. H. Lantsberry, of the National Physical Laboratory, Teddington. 8 p.m.

London County Council Central School of Arts and Crafts, Southampton-row, W.C. (Free Lectures on Historic Arts and Crafts).—Mr. A. F. Kendrick on "Embroideries"—I. 6 p.m.

SATURDAY, JANUARY 22.

The Builders' Foremen's Association.—Sixteenth annual dinner, King's Hall, Holborn Restaurant. 6.30 p.m.

Junior Institution of Engineers.—Visit to the new generating-station of the Westminster Electric Supply Corporation, Horseferry-road, Westminster. 3 p.m.

Aberdeen Architectural Association.—Mr. Alex. M'Gibbon on "Architectural Forms not Influenced by Material: a Popular Opinion Controverted." Illustrated. 7.30 p.m.

MONDAY, JANUARY 24.

Surveyors' Institution.—The adjourned discussion on Mr. Davidge's paper, "Town Planning Systems," and Mr. John Willmot's paper on "The Housing, Town Planning, etc., Act, 1909." 8 p.m.

Liverpool Architectural Society.—Mr. R. Rathbone on "The City Beautiful; or Liverpool Compared with Cities Old and Modern." Lantern slides. 6 p.m.

Royal Society of Arts (Cantor Lecture).—Mr. Alan S. Cole, C.B., on "Textile Ornamentation"—II. 8 p.m.

TUESDAY, JANUARY 25.

University Extension Lectures (British Museum).—Lecture on "Ancient Architecture," by Mr. Banister Fletcher.—XVI. "The Roman Therma." 4.30 p.m.

Institution of Civil Engineers.—Mr. I. C. Barling, M.Inst.C.E., on "The Reconstruction of the Tyne North Pier." 8 p.m.

WEDNESDAY, JANUARY 26.

Carpenters' Hall, London-wall (Free Lectures on Arts Connected with Building).—Mr. Banister F. Fletcher on "The Carpenter's Craft." 7.30 p.m.

Royal Society of Arts.—Mr. Omar Ramsden on "Goldsmiths' and Silversmiths' Work." 8 p.m.

THURSDAY, JANUARY 27.

Architectural Association Camera and Sketching Club.—Annual general meeting. 7.30 p.m.

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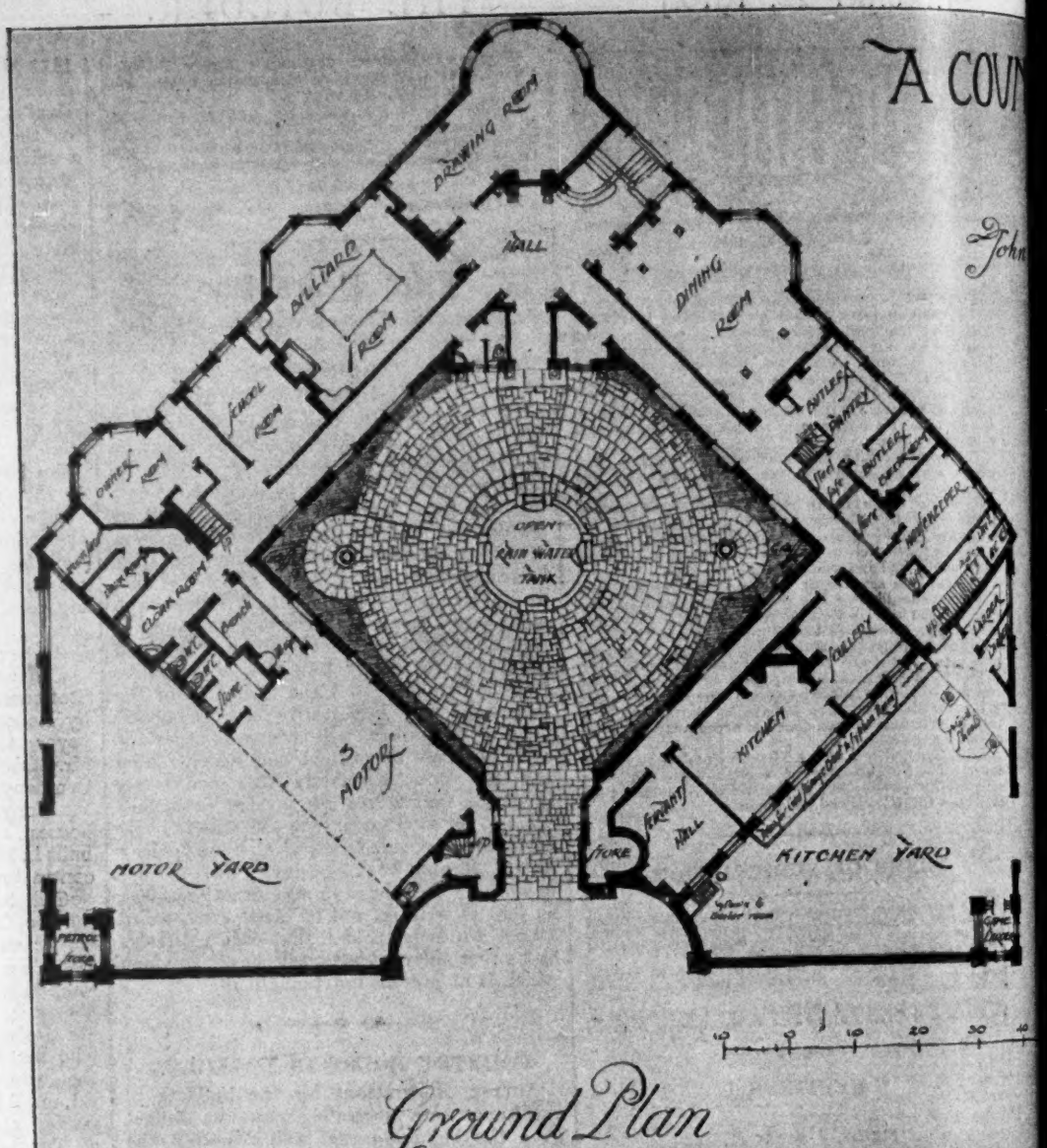
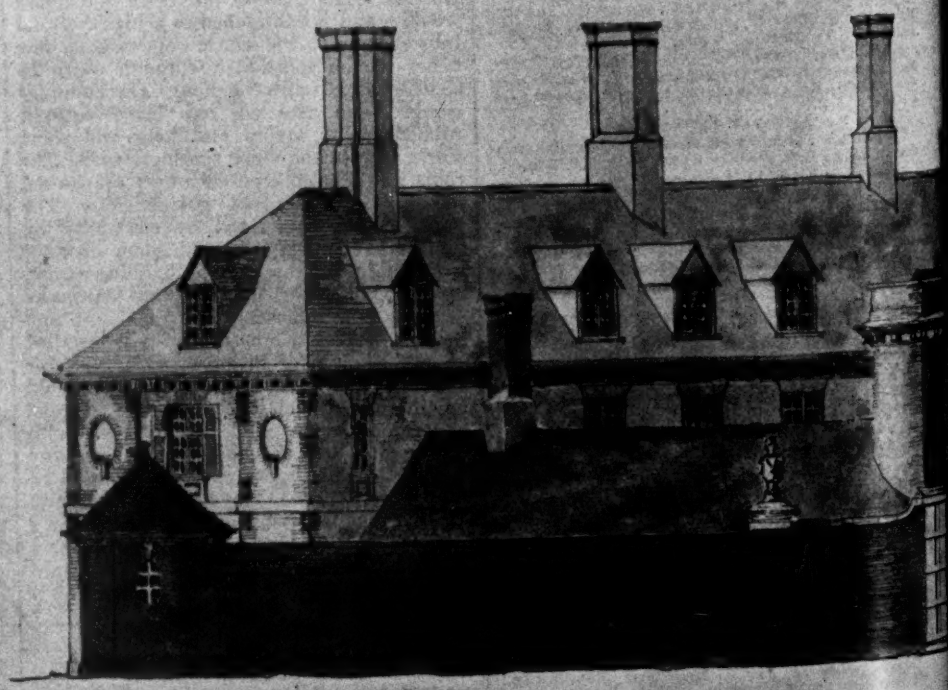


Ground Plan



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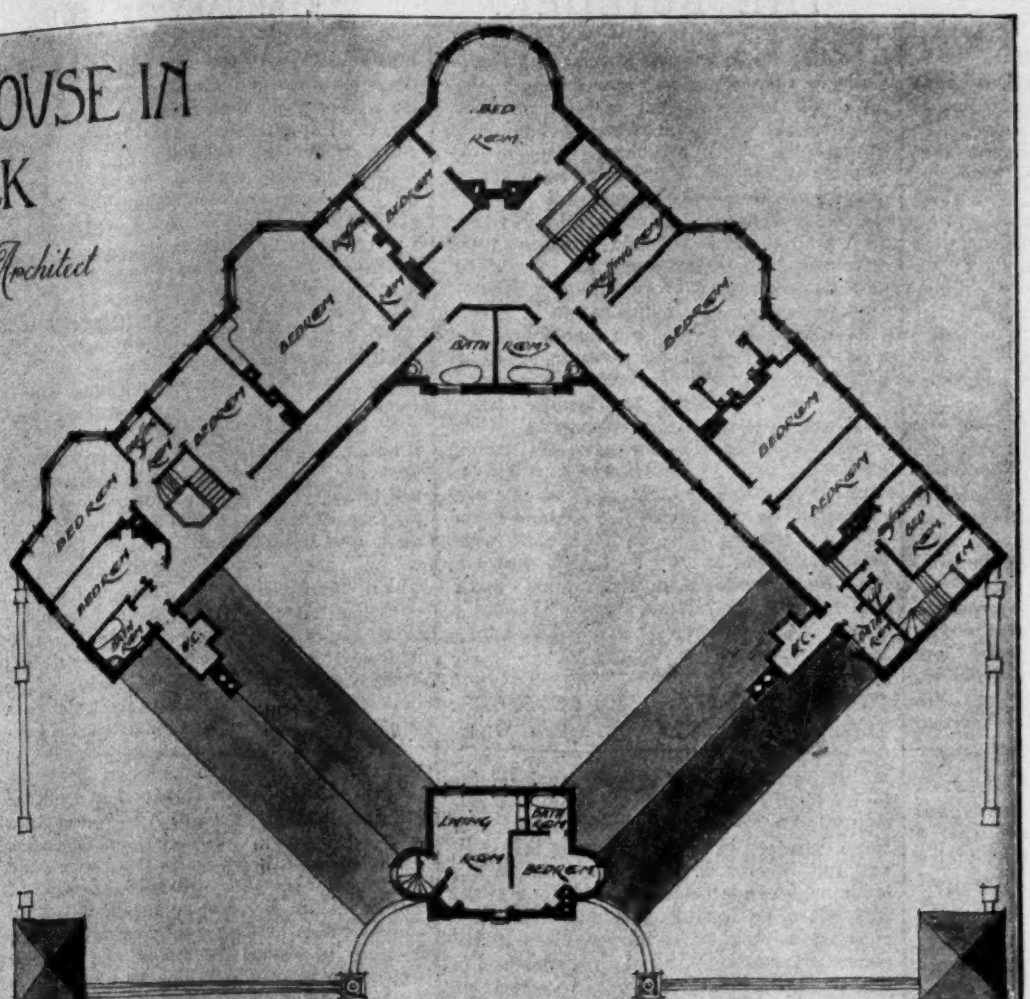
BED ROOM
BEDROOM
BATH ROOM
LIVING ROOM
BEDROOM
BATH ROOM
BEDROOM
BEDROOM
BED

"MARISTOW," DEVON.

We give a view of "Maristow," a house being altered and enlarged by Messrs. Ernest George & Yates for Sir Henry Lopes.

It is in a beautiful part of Devonshire, the Tavey running beneath the new forecourt wall that is seen in the drawing. The original house had two shallow projecting wings, and the necessity for more accommodation has led to the extension of these, giving a fine library in one wing, and a dining-room, steward's room, etc., in the other.

On the inner side of the forecourt the two-storied porch leads into the hall, which, with the staircase, occupies that length of the building.

Many internal changes have been necessary to bring comfort and convenience into the house without changing its character. Climatic conditions (its nearness to Dartmoor) seem to have made it necessary at one time to cover this stone house with stucco, without which it is held that the local stone will not keep out the salt mists.

Messrs. Lapthorn & Co., of Plymouth, have carried out the building works, while Messrs. Haward & Wooster, of Bath, are panelling the dining-room up to the ceiling, and are preparing the mahogany pilasters and fittings for the library. Mr. Worden is acting as clerk of works.

CHRIST CHURCH, SHAW, WILTS.

This church was erected in 1838 on a typical plan of that period—a wide nave with a recess at the east end for the altar, and a small vestry on the north of it; a porch at the west end with bell cot over.

This has been remodelled, as shown in the view, by inserting two arcades of oak with half-timbered clearstory, carried up to the nave roof, forming nave and aisles, and cutting down the height of the latter to form lean-to roofs, with the exception of the eastern part of the nave, which has been gabled and treated as a transept choir, with an oak flèche at the intersection of the roofs, the organ being placed over the north choir aisle. The height and pitch of the nave roof therefore remain as before. A new apse takes the place of the former "recess," but the vestry remains for use as a sacristy.

A new tower has been erected at the north-west angle of the nave and forms the main entrance porch; a vestry occupies the corresponding position on the south, and the nave is extended westward between the two, and forms the bapistry.

The choir is divided from the nave and choir aisles by oak screens; a reredos of oak 15 ft. high stands out from the end of the apse, and the choir is fitted with oak stalls. The roofs are of oak, and the lower stage of the tower is vaulted in stone.

Mr. C. E. Ponting, of Marlborough, is the architect.

PICTURE GALLERIES.

The Fine Art Society.

The "Water-colours of Greece, Italy, and England," by Mr. Mavrogordato, at the Fine Art Society, are a fine collection, containing many works of great interest and beauty. A considerable number of them deal with architectural subjects in Greece and Italy, and combine architectural with landscape interest. Among those more especially architectural are illustrations of the Temple of the Winds, the Temple of Jupiter Olympius, the Arch of Titus, two of the arched-covered streets of Perugia, and an exceedingly curious corner of "Old buildings at Tivoli." "Tivoli, Early Morning"; "Assisi from the Carceri Road"; and "Venice, an Autumn Morning" are the best examples of the artist's fine perception of sunlight and colour effect in broader landscape subjects. Nearly all the drawings are good, and marked by originality of style and feeling.

The Goupil Gallery.

The Senefelder Club, established "for the advancement of artistic lithography," is holding its first exhibition at the Goupil Gallery. By "artistic lithography" they no doubt mean original creation in lithography. As is truly remarked in the preface, lithography had for a long time, in this country at least, sunk to a mere trade system of reproduction in a mechanical manner, till its very name had come into disrepute with artists. It is possible, however, to be as original in lithography as in etching, and the Senefelder Club exhibition is intended as a reminder and an illustration of this.

The collection is rather a mixed one; the modern taste for ugliness pervades too many of the figure subjects; but there are some fine things; among them M. Desiré Lucas's "Le Bénédicite," an interior with figures rather recalling the manner and feeling of Israels. Mr. E. A. Hope's large studies of figures, though coarse in character and execution, have a certain power about them. But we are inclined to think that what lithography can exactly do best is shown in Mr. Nelson Dawson's and Mr. Pennell's architectural scenes. Mr. Dawson's "Thun," a street sketch, is perfectly handled in a light and free manner.

THE CARPENTERS' HALL LECTURES:

Lectures on Arts Connected with Building.

The Carpenters' Company is again giving in its Hall a series of lectures on the arts connected with building, in continuation of those delivered in the early part of last year, and full reports of which appeared in our columns. The lectures will, as before, in the first place be for all craftsmen and those engaged in actual trades in connexion with the constructive arts, but all of either sex and of any trade or profession are invited to attend. Admission will be free by ticket. The lectures will last about three-quarters of an hour, and at the close questions on them may be asked. At the end of the course prizes will be offered under the following amongst other conditions:—

(1) Only craftsmen or those engaged in the actual work of carpentry, joinery, or the other arts connected with building can compete. The successful competitors, if called upon so to do, must satisfy the judges in this respect.
(2) All competitors must have attended at least eight lectures of this series.
(3) No competitor can take more than one prize. Good design will receive more consideration than skill in draughtsmanship, i.e., design thoroughly appropriate for the material dealt with. Preference will be given to good working drawings.

What is Artistic Craftsmanship?

The names of the thirteen lecturers, with their subjects, have already been given in the *Builder*, and on Wednesday last week the first lecture was delivered by Professor Beresford Pite, whose subject was entitled "What is Artistic Craftsmanship?" The Master of the Carpenters' Company, the Rev. C. B. Bartlett, presided.

Professor Pite said: Is there a distinction between artistic and non-artistic craftsmanship? What did we mean by craftsmanship and what did we mean by artistic? These were questions which they had to consider and perhaps answer, seeing, by the way, if there was a sympathetic link between such a matter of pure sentiment as anything dubbed artistic must be, and the matter-of-fact reality which was occasioned, and was the result of practical craftsmanship. What was this combination of the refined atmosphere of the Academy, the workshop, and the factory? Was craftsmanship one thing and anything artistic very much the opposite? Did it mean work produced by artistic craftsmen, distinguished from ordinary workmen? Artistic craftsmanship was a virtue which doubtless had a past to contend with and triumph over, but that it would rise upon the dead ashes of its first and perhaps false reputation, on a balancing of the facts, to a usefulness when properly understood, he had little doubt and very much hope.

What was craftsmanship, then? Did it not mean that workmanship which was sufficient and properly skilful, work well done by one who understood his trade, *i.e.*, master both over material and tools? Work done by some one who knew what he could do with certain materials and by means of certain implements? This might be instanced by the intricacy and beauty of Indian surface carving, wood or ivory; by the mechanical craftsmanship of watch and clock making, and also by the trade of the bricklayer. The craftsmanship in each of these was the exercise of the skilled craftsman or workman; and one must proceed to ask, Was this artistic craftsmanship? We must assume that the craftsman had honestly done his level best and by using his intelligence had produced sound and perfect work but, granted the best craftsmanship, was the result necessarily artistic? And if not, what on earth did we mean by asking that it should be artistic? What lacked the poor fellow who had done his very best, putting earnestness and honesty into his work and hoping that it would be worthy of his pride when accomplished — work which was the source of his daily bread, his daily joy in achievement and mastery? Were his labours inferior? Was his result less worthy because of some uncertain and indefinite standard which could not be imparted to his mind? Was he the prey of a supercilious, amateur, pseudo-artistic criticism? In such difficulties how useful were the building crafts to us when faced with artistic riddles! We turn to the mother of all the arts to explain what constituted true artistic quality in craftsmanship. Among the building crafts there were many in which the thorough-going honesty of workmanship he had referred to seemed to be all that at first sight was possible—the framing of carpentry floors and partition walls, the unseen portions of roofs. What could be done to make such work artistic? We might fairly describe as inartistic the work put in between the floor boards and a plaster ceiling, which would not be exposed to view. Drain work also suggested craftsmanship which was not artistic because hidden from view, though to the eye of the expert the properly-laid duct with perfect collars and sound junctions was a feast of the senses. The plumber, too, had asserted himself on our walls; and here again the craftsmanship must needs be perfect, and it was in evidence, too! Therefore, why not call it artistic? For to all who read thoughts in deeds it revealed the worker in his work—pleasantly and intelligently enjoying his work in conscious mastery of it, thus necessarily giving satisfaction to those who saw it. This sort of plumbing was, of course, different from the ornamental leadwork of rain-water heads and vases, but there could be little doubt as to its craftsmanship and interest, though it might not be called ornamental.

The lecturer then showed a large number of excellent lantern slides in illustration of his thesis. Stongehenge was the first, and it was given as an example of craftsmanship pure and simple; but so far as the expression of each principal was concerned it was artistically satisfactory; and as far as the workmanship and skill involved in piling the lintels on the post it excited our approving attention.

The ruins of Paestum showed the same lintels and the same posts, but there had entered into the mind of the craftsman something more than merely dealing with the structural necessities of the case. The simple factors of support in the columns and of spacing between the columns hinged upon the capacity of the lintel to span the distance between the columns, and there was no other factor in these early temples.

The Parthenon at Athens showed exactly the same structural difficulty and the same problem of craftsmanship, and we had at once an admitted standard of artistic satisfaction evolved out of the simple problem of craftsmanship, based upon the necessity of the lintel. The columns were close together, because they could not be put further apart, and craftsmanship had become artistic

PHOTO-LITHO. SPRAGUE & Co' L.D. 4 1 3, EAST HARDING STREET, FETTER LANE, E.C.

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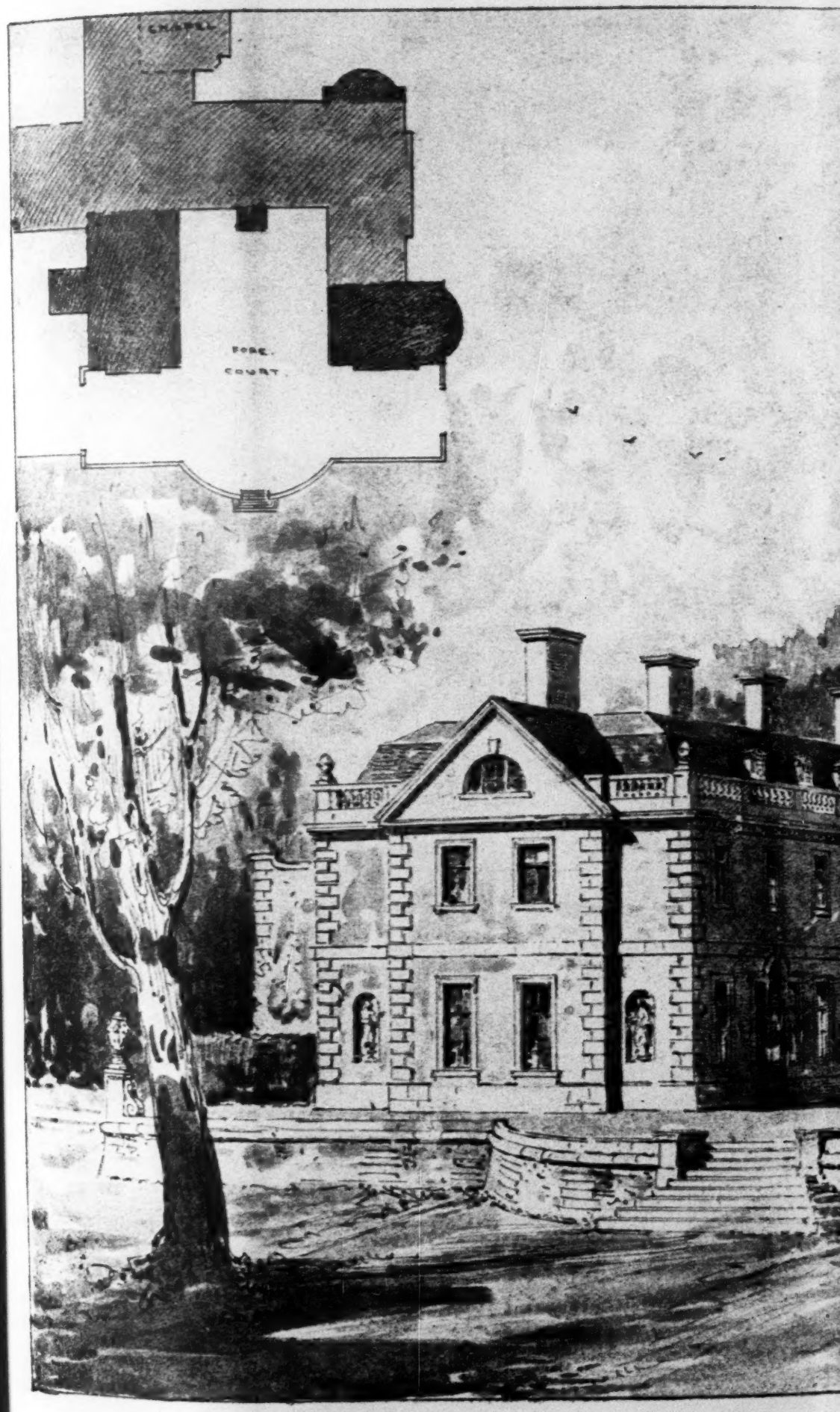
HALLS OF THE

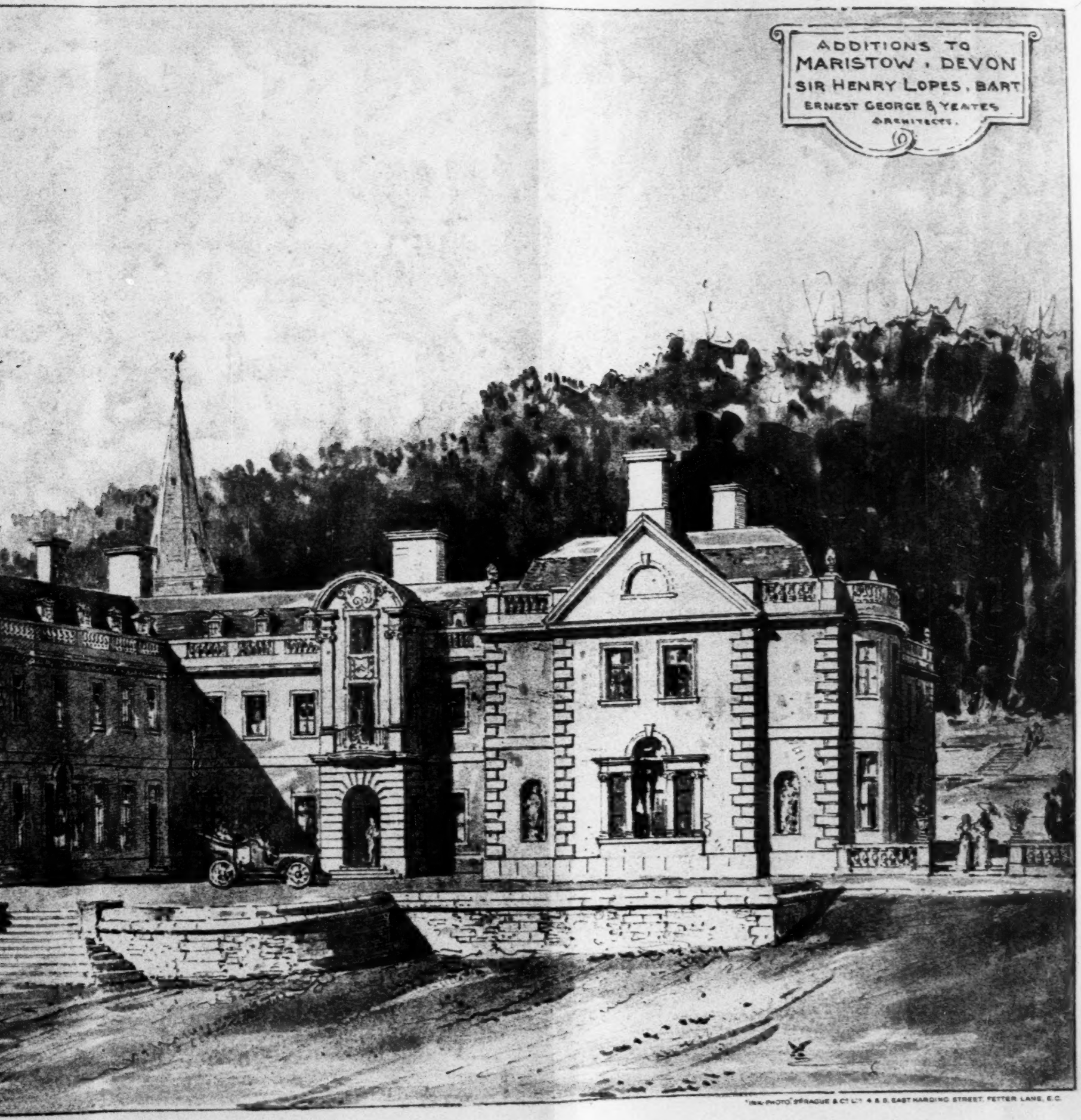
PHOTO-LITHO. SPRAGUE & Co. L.D. 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.

HALLS OF THE CITY COMPANIES: I.—STATIONERS' HALL.

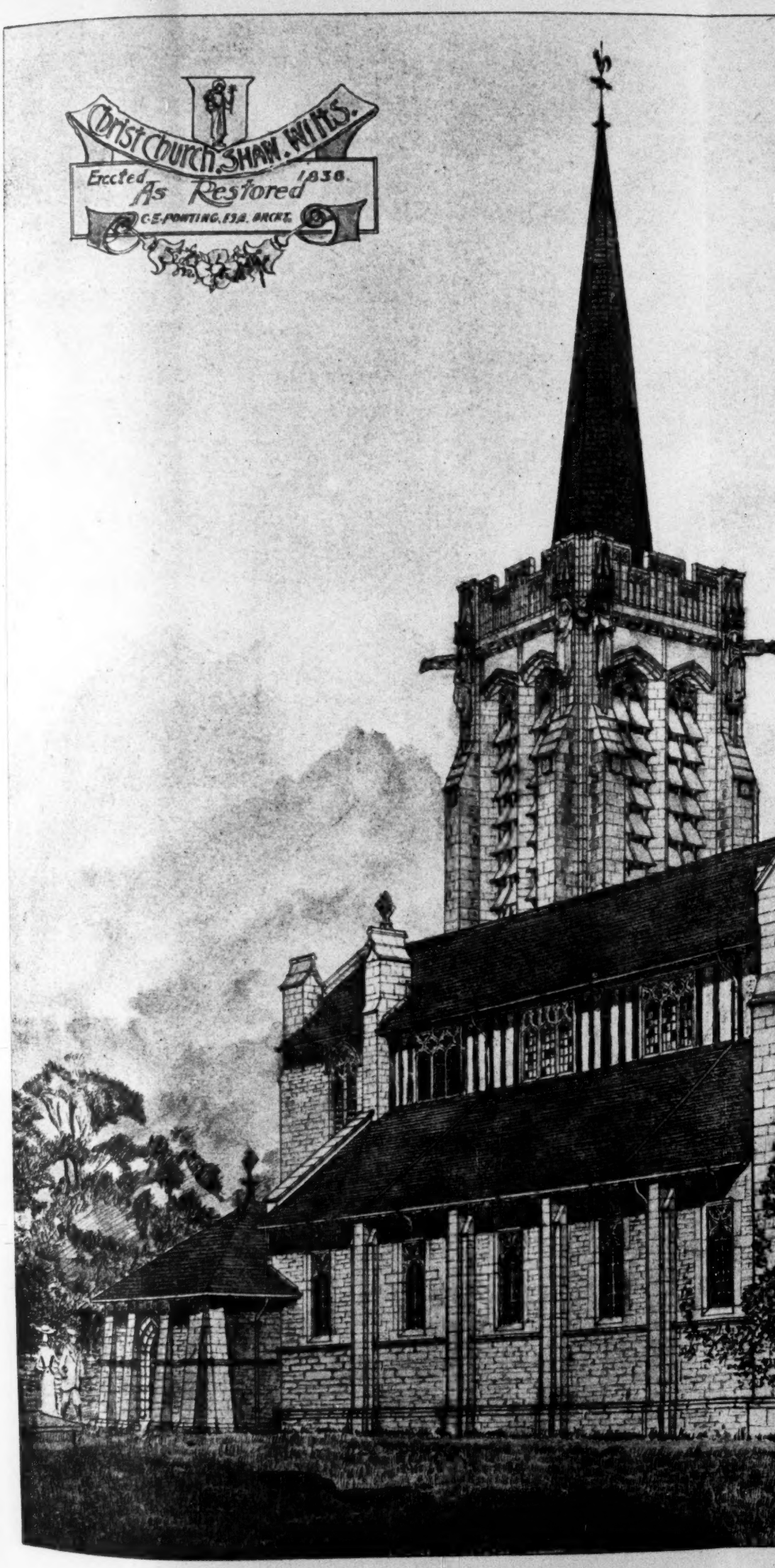


Royal Academy Exhibition, 1909.

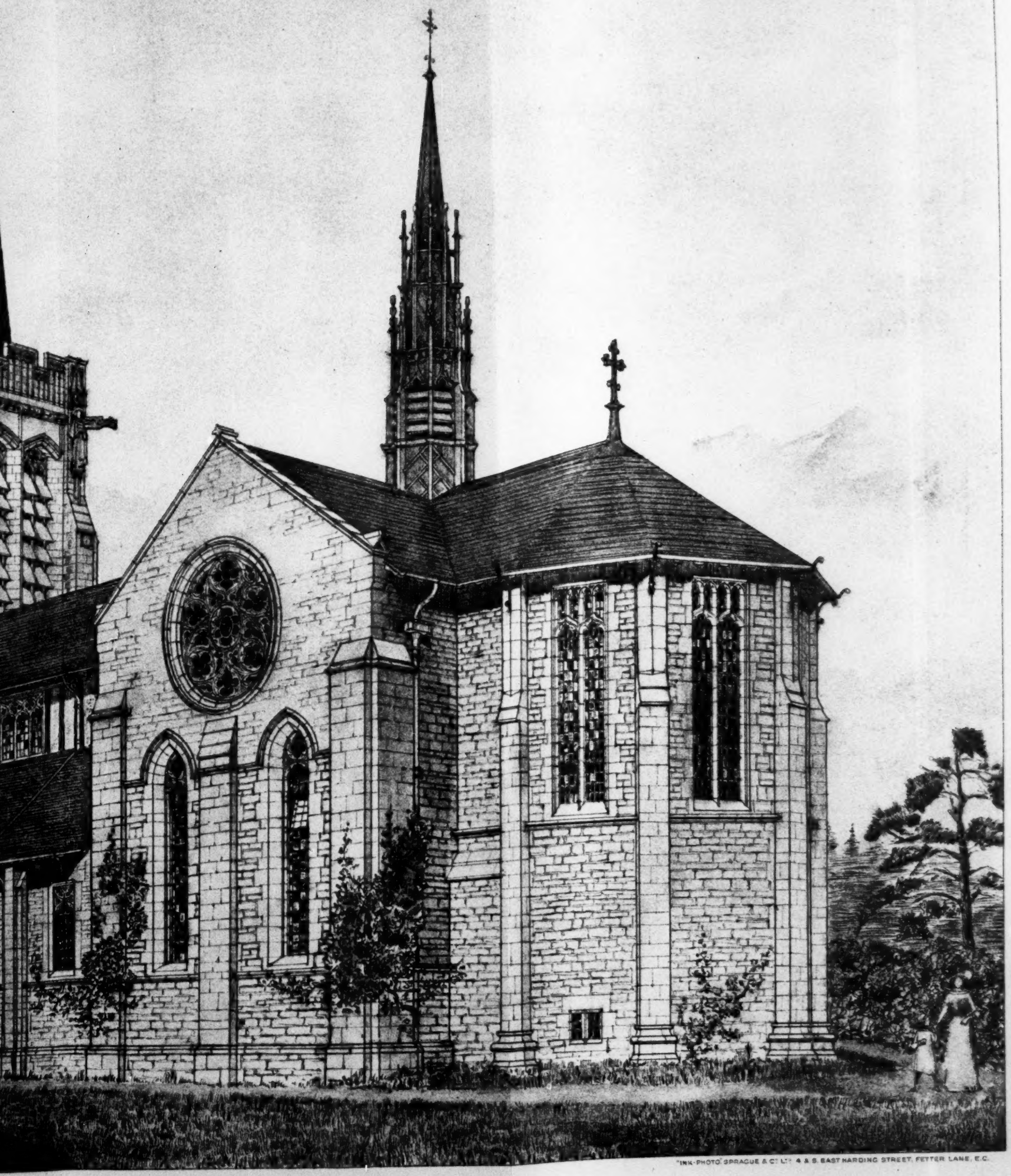
ADDITIONS TO
MARISTOW · DEVON
SIR HENRY LOPES, BART
ERNEST GEORGE & YEATES
ARCHITECTS.



'BUILDER' PHOTO BY SPRAGUE & Co LTD 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.



Royal *Academy Exhibition*, **1909**.



"INK-PHOTO" SPRAGUE & Co LTD 4 & 5 EAST HARDING STREET, FETTER LANE, E.C.

because of the refinement he attached to it. If the Greeks had had the use of steel girders or ferro-concrete material they would have been delighted to find that they could span the whole of a big front with a beam such as had been employed in the new post-office building in Newgate Street.

The porticos of the Erectheion showed artistic refinements not imposed from outside upon the craftsman, but growing up under his hand as an addition to his workmanship, and in the better knowledge of the possibilities of his hand and his tools. No theory of craftsmanship, no fad of his or theirs as to the supremacy of the craftsman, would account for the presence of the six female figures of the caryatid portico supporting the entablature; an element of poetry had come in—an element which gave something higher to the material, something imported to the stone column; the dignity, the wonderful power and quiet sense of supporting dignity and power which these figures possessed. The spirit of art had entered—the spirit of art and the art of craftsmanship in another connexion. In this case art was leading and craftsmanship was following.

The lecturer showed two illustrations of a memorial slab expressing craftsmanship in the sculptor's art as well as in the builder's art employed in poetic expression; and another type of artistic craftsmanship illustrated was the Corinthian order. This was a freak of craftsmanship, for the Corinthian cap had a bronze origin, and the craftsmanship was imitating in stone the achievements of another material—something additional to his material and to his own craft, something which he had learnt from another craft.

The lecturer showed a view on the Tiber illustrating an obviously modern chimney, a mediæval campanile, and the three rings of arch masonry forming the exit into the Tiber of the Cloaca Maxima—the most interesting piece of masonry in the world, the oldest constructional arch known, and showing so much artistic craftsmanship, though it was difficult to say where the element of craftsmanship came in. Other illustrations followed to show that healthy craftsmanship and the honest attempt to do the best that was possible with material gathered in the course of time the artistic element, though the external poetry of sculpture did not enter. We learnt in this way the lesson to express as directly as we could our purpose, and to trust to Providence to give a right effect. In the views he was showing there was a directness about the work; sober craftsmanship attaining an artistic quality by its simpleness and directness. And he believed that the craftsmen of the time, who worked without an "architect" as we understood that word, had no idea that their buildings were artistic. They built plain buildings to keep the weather out, and the art was in the special features—the screen, the capital, and so on; and it was difficult to say where the craftsmen left them and the artist began—difficult, because it was artistic craftsmanship. He hoped our eyes would soon be opened to see this quality of directness and simplicity which was to be seen in so much mediæval work—in the Westgate at Canterbury, for instance. In seeking for revived interest, for new vigour in the handicrafts we might learn to deal with them for what they were worth in themselves, so that the student who set to work in woodwork, for instance, worked *ab initio*, as the old craftsmen did.

We had an answer, if not the whole answer, to the question: What is artistic craftsmanship? by turning to the building arts and seeing the mediæval natural treatment of work, where the craftsman evolved from the circumstances the simple and best solution of the problem. He became artistic by simply tackling his work honestly and directly; he forgot that he had to be artistic by the mere fact that he did what he had to do honestly, simply, and directly. He would like to suggest that all work honestly done, all work intelligently done, all work pleasurably done—that was to say, all work satisfactorily done, was really work beautifully done, and work beautifully done was work artistically done.

On the motion of the Chairman, a hearty vote of thanks was accorded to the lecturer, who said in reply that he hoped no one would go away with the idea that it was necessary to be born artistic.

THE ARCHITECTURAL ASSOCIATION SPRING VISITS:

Office of Woods and Forests.

The first spring visit of the session, which took place on Saturday, January 16, was to the new offices in Whitehall for the Commissioners of Woods and Forests, where a large party of members was received by the architect, Mr. John Murray. As illustrations appeared in the *Builder* of January 8 any general description of the building is unnecessary. The plan in laid out on simple and architectural lines, but involves the devotion of a considerable amount of space to the central staircase and corridors. Internally, this staircase, with Hopton-Wood stone dado and low solid balustrade, and iron central lift enclosure by the Bromsgrove Guild, presents the most striking feature. The ironwork is well in scale with the rather ponderous detail of most of the interior. The joinery to the ground and first-floor offices (the latter a sort of *piano nobile* above a low mezzanine) is executed in oak, and the chimneypieces are by Mr. J. P. White, of Bedford. All the offices on the lower floors are fitted with double sashes to exclude street noise.

Upon the site stood old buildings erected at the end of the XVIIIth century on land once forming part of the garden of Whitehall Palace. The new building has two basements contained in a concrete and asphalte tank, and during excavation numerous larch and fir piles in a sound condition were removed. As the lowest floor is above storm level the drainage system is suspended in cast-iron pipes from the floor above.

Regarded individually, this building is not the least satisfactory of the several blocks of Government Offices which are gradually absorbing Whitehall, particularly in view of the difficult proportions of its fronts. In no other country in the world, however, is it probable that public buildings would be left to develop in the piecemeal manner with which we are only too familiar. In the present case some attempt has been made to establish a relation with the adjoining War Office—the cornices and strings lining with that building—but the unsupported efforts of architects alone are powerless to produce much effect in the direction of larger handling.

The front of this building is excellently detailed, the proportions and profiles of the cornices dividing the three principal horizontal stages being particularly good. It appears, however, that some reduction in the projection of the balustraded balconies between the columns would have been an improvement—still it is a minor point.

The party next proceeded to the

Wesleyan Church House, Westminster.

Here they were met by Mr. Lanchester, who conducted them over the building, at present in a not very advanced state, though it was gratifying to hear that no irretrievable damage is likely to result to the design from the rights of adjoining owners which have been the cause of delay. The masterly plan of this building is (or deserves to be) familiar to all, and it is impossible even at this stage to avoid recognising that a work of real organic architecture is in process of formation. A promised future visit when the building is nearer completion will be a pleasurable anticipation.

The dignified planning of the entrance and principal stairs had developed sufficiently to be appreciated, and the main hall on the upper floor was far enough advanced to give some idea of its huge proportions. The fire-resisting construction was in an interesting stage. The bulk of the internal construction is of breeze concrete on a skeleton steel framing, supplemented by the use of armoured concrete intermediate fillings, thus securing the utmost lightness, with strength and rigidity. The concrete construction of the large tearoom in the basement, estimated to seat 1,000 people, was exceptionally interesting; the very flat pendentive ceiling, admirably worked out, rather recalls Soane.

An interesting collection of working drawings was on view in the clerk of works' office.

Architectural Societies.

LEEDS AND YORKSHIRE ARCHITECTURAL SOCIETY.

On Thursday, January 13, at a meeting of the Society, Professor S. D. Adshead, of Liverpool, introduced the subject of "Town Planning," with special reference to the Housing and Town Planning Act and its bearing upon suburban dwellings. In discussing the Act, he pointed out to what extent the exercise of goodwill and tact on the parts of those concerned in negotiations would be required for its satisfactory administration. He urged the necessity for a unity of purpose, and warned against the danger of isolated areas being "town planned" without due reference to the whole, a possible result of a too literal reading of the Act. Town planning had in the past been largely responsible for the tastes and inclinations of the working man. He was, unless taken in hand by his employer, either driven into a slum or catered for by the speculating builder whose taste was the very worst. What could town planning do for him?

With improved communications there was no reason why working men should not, if they so desired, live outside the town, where land was plentiful and cheap, and the pleasures of a garden could be enjoyed. So long as town dwellings were adhered to, these should be on the block system—an arrangement adapted in many ways to modern conditions. Concerning the middle classes, here again a lack of appreciation of real art had rendered them a ready prey to the speculating builder, who, while conforming to the by-laws, had produced monotonous rows of cubicles which attracted the unsophisticated with a thin veneer of respectability in the shape of sham ornament. The individual building-owner had attempted to make his building the climax of the street. Self-assertion had been unchecked. Thus the Town Planning Act was destined to become one of the most important and consequential of all recent reforms. For the future a new beginning was impossible; we must make the best use of what we possessed. Terraces could be with little alteration converted into blocks of tenements, while, stripped of its "ornament," the Mid-Victorian house might even attain to a stuccoed simplicity. The chief opportunity for real development, however, was offered by the outer ring of undeveloped land extending beyond our suburbs. Here the choice of a suitable and utilitarian style for future buildings suggested wide possibilities. There was much to be said for the pedimented villa of the Regency and early Victorian periods, the fine simplicity of which, combined with its compatibility with modern needs, must appeal to the increasing artistic intelligence of the people.

Referring to recent examples of suburban development, Professor Adshead pointed out that they must by no means be regarded as final results, but as experiments in a far-reaching movement. There was much confusion of refinement with rusticity; these did not go necessarily hand in hand; the magnificent cottage did not suggest the residence of pretension; there was a limit to the stretching capabilities of the rustic cottage. In planning the residential quarter

of a town the occupation and taste, the tendencies either rusticated or refined of its prospective population must all be equally considered, and a disposition and an architecture evolved at once utilitarian, harmonious, and beautiful.

The lecture was illustrated by plans and views having reference to town planning both in this country and abroad. A vote of thanks was accorded the lecturer on the motion of Councillor Boyle, and a discussion ensued, in which Messrs. Percy Robinson, S. D. Kitson, and Butler Wilson joined.

The next general meeting of the Society will be held on Thursday, January 27, when Mr. J. A. Gotch will discuss "The Elizabethan House as Illustrated by Contemporary Architectural Drawings."

NOTTINGHAM ARCHITECTURAL SOCIETY.

The second meeting of the Designing and Discussion Club connected with this Society was held on Tuesday evening, the 11th inst., at the Society's room, Mr. S. G. Walker being in the chair. The subject set by Mr. Dale, the Visitor, was "A Design for a Boathouse." After the criticism a discussion followed, in which the students took part.

WARDROBE AT THE ARTS AND CRAFTS EXHIBITION.

THE oak wardrobe illustrated here stands at the top of the North Room in the Arts and Crafts Exhibition, and is by Mr. Ambrose Heal. It has already been noticed in our article on the Exhibition last week.

Correspondence.

DEFLECTION OF THE AXIS OF THE CHOIR IN CHURCHES.

SIR,—By referring to the ground plans in the *Builder* Cathedral Series, it will be seen that, in addition to Litchfield, there is a marked deflection in at least the following cathedrals, viz., Canterbury, York, Ripon, Ely, Bristol, Oxford, Bangor, Glasgow, Edinburgh, and Iona. In many of our village churches a similar deflection is noticed in the chancels, although in some cases it is so slight that it can hardly be perceived from the inside, but upon ascending the western tower it may often be seen that if the ridge line of the nave roof were produced it would not coincide with the ridge of the chancel roof.

And this deflection is not always in one direction; in some cases it is towards the north, in others towards the south. This question seems to open up the subject of the orientation of churches generally, and, if a rule can be found for that, it may tend to explain the reason of the deviation of one axis from the line of the other.

The poem of Wordsworth written on seeing the foundation preparing for the erection of a chapel in Westmorland, has often been quoted, and need not be repeated here, but the note which is printed with it lays down a definite rule of orientation as follows:—

"Our churches, invariably, perhaps, stand east and west, but *why* is by few persons *exactly* known; nor, that the degree of deviation from due east, often noticeable in the ancient ones, was determined in each particular case by the point in the horizon, at which the sun rose upon the day of the saint to whom the church was dedicated. These observances of our ancestors, and the causes of them, are the subject of the following stanzas."

That this rule has been followed in many cases will be apparent to anyone who has noted the direction of the axis of several ancient churches, when it will probably be found that they all lie within the limits, north and south of true east, as determined by the sun at rising at the summer and winter solstices.

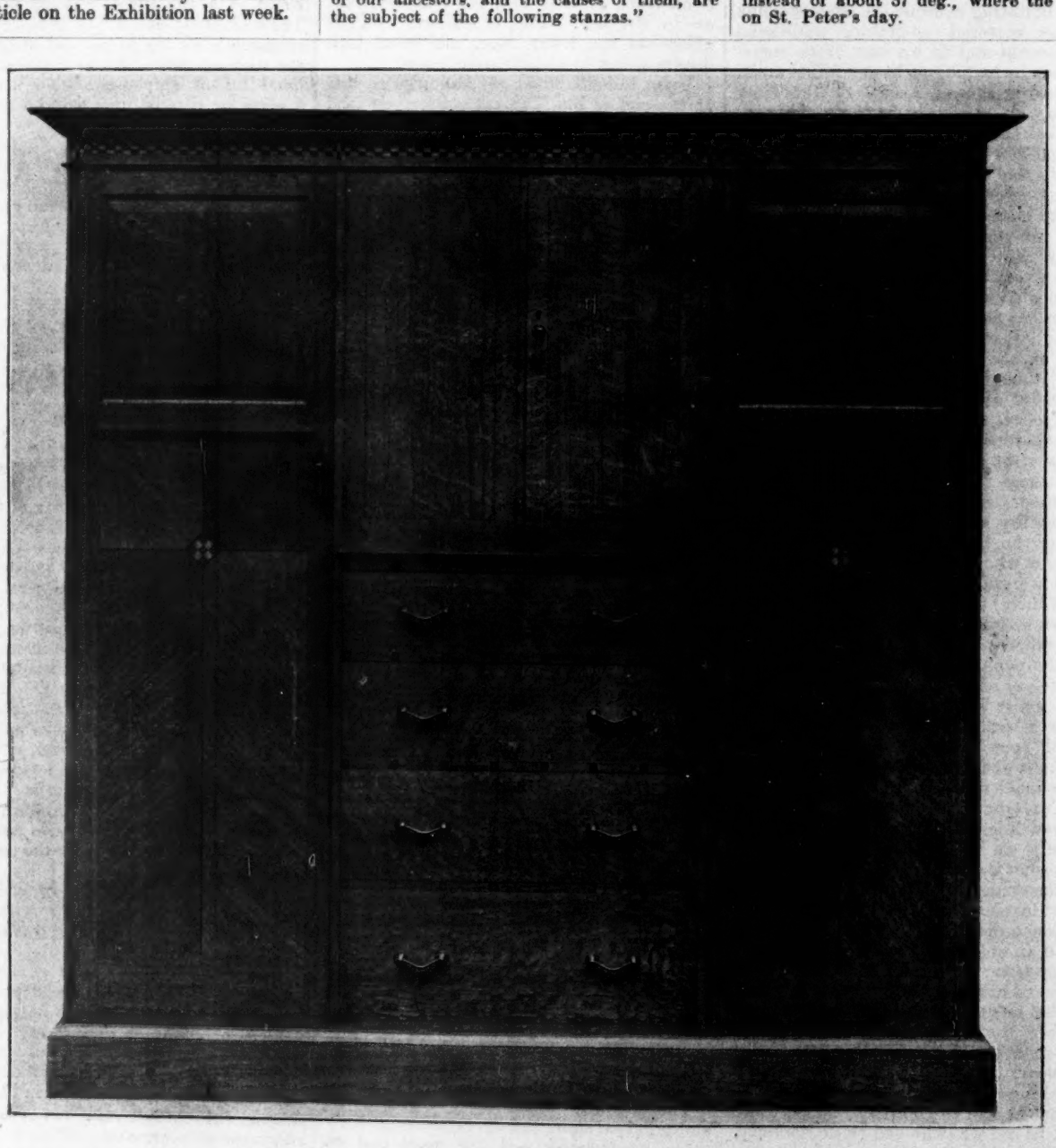
The Church of St. Sophia, Constantinople, is stated to be the most authenticated example of orientation by this rule, and it shows how considerable a deviation from true east the axis of a church may have if connected with a day near either of the solstices.

Mr. W. R. Lethaby, in dealing with this famous building, "The Church of Christ, the Holy Wisdom," says the orientation is 32¾ deg. south of east, and is in exact agreement with the ray of the rising sun on Christmas Day.

By this rule, then, the axes of nave and choir where they do not coincide must refer to two days, as dated by the sun, and may mean a double dedication when the foundations are of the same period, or a rededication if they belong to two different periods.

There can be little room for doubt that rededications of our churches have been very numerous indeed, and when the dedication is found to agree with the orientation it is most probably the original one, but, where they differ, then a rededication has probably taken place. It is, of course, comparatively easy to alter the dedication of a church, but to alter its orientation would involve pulling it down entirely, and laying its foundation in a different direction; therefore, to avoid this various expedients have been resorted to.

The following instance will probably illustrate this:—The Church of Staple Fitzpaine, Somerset, is dedicated to St. Peter, but the orientation is about 12 deg. north of east instead of about 37 deg., where the sun rises on St. Peter's day.



Inlaid Oak Wardrobe. By Mr. Ambrose Heal (Messrs. Heal & Son).
No. 371 in the Arts and Crafts Exhibition.

It is therefore clear that according to this rule this cannot be the original dedication.

There is a Norman doorway remaining in the church, and it is evident that an earlier building existed upon the site. In the XVth century a north aisle appears to have been added, and the builders seem to have shown dissatisfaction with the original dedication, and connected St. Peter with their work in the following way:—At the north-east angle of this aisle they carved a small figure in a little niche, which, if closely examined, will be found to be that of an ecclesiastic with his right hand uplifted, in the act of blessing, and holding in his left a staff, with Latin cross-shaped top, his head being covered with a plain cap, such as was worn by the earlier popes before the three coronets forming the tiara were placed over the cap.

This figure, it is thought, looking towards the sun rising on St. Peter's Day, may be intended to represent him as the patron saint, and to refer, at the same time, to the mistaken idea that he was the first bishop of Rome. This dedication and orientation were made to agree, but not in the usual way of directing the axis, instead of a figure of the patron saint, towards the sun rising.

J. HOUGHTON SPENCER.

Taunton, January 17.

SIR,—The parish church of All Saints, Loughborough, is an example where the axial centre of the chancel differs from that of the nave. The chancel in this case leans on plan to a considerable extent towards the south, and, if your correspondent desires, I will gladly determine the angle of deflection for him. I do not know of any explanation of this peculiarity beyond the two given in your issue.

B.

THE CLAPHAM FIRE.

SIR,—In reference to the disastrous fire at the premises of Messrs. Arding & Hobbs, Clapham Junction, which resulted in so much loss, and of which you print such an interesting description in your issue of the 8th inst., we notice that you say that the only parts of the structure that remained sound were one or two concrete staircases, and parts of the concrete block partitions. As a matter of fact, however, our steel and iron fire-escape staircase was quite intact after the fire, and we fear that it was largely due to the internal arrangements of the building that this staircase was not largely used for purposes of escape.

The openings were fitted with our fire-resisting steel doors, but these could not be used on account of the fact that escape from different parts seems not to have been possible except through the openings which these doors were designed to cover. In any case, the risk of preventing the escape of people within the rooms seems to have been sufficient inducement to those in charge not to close them when the fire started. Had they been closed there is no doubt they would have proved as efficient in preventing the fire from spreading through the wall openings as has been the case in some other recent fires in London.

HUGH LEADER,
Director, The St. Pancras Iron Work Company, Ltd.

NATIONAL MUSEUM OF WALES.

SIR,—"Competitor" must be a very young competitor not to see that his action is in itself an infringement of the competition conditions, for what is trying to obtain an extension of time at the eleventh hour but an attempt to obtain an advantage over the competitors who have worked to time? The time was abundantly sufficient.

ANOTHER COMPETITOR.

Trade Catalogue.

MESSRS. WILLIAM MORRIS & Co., of Ruskin House, send us a large and fine folio catalogue printed on brown paper, and containing things practical and artistic. Among the practical is a two-way fastener handle for metal casement windows, contrived to hold the catch 2 in. open, for ventilation, by turning the catch back on itself into a specially provided clip, so as to hold the window fast without rattling. The catalogue shows also a "cleanable" casement window turned round edgeways in the frame. Among the artistic objects are designs for door-furniture, grates, etc., and a large number of designs for the decorative leading of windows, with or without stained glass introduced. These are very various and in excellent taste, and form perhaps the strongest part of the catalogue.

BOOKS RECEIVED.

THE SANITATION, WATER SUPPLY, AND SEWAGE DISPOSAL OF COUNTRY HOUSES. Pp. 328. (Crosby Lockwood & Son. 8s. 6d.)

BUTTERWORTH'S WORKMEN'S COMPENSATION CASES. Edited by His Honour Judge Ruegg, K.C., and Douglas Knocker, Barrister-at-Law. Vol. II. Pp. 515. (Butterworth & Co. 7s. 6d.)

SPON'S ARCHITECTS' AND BUILDERS' PRICE-BOOK: Thirty-seventh Edition. Edited by Clyde Young, A.R.I.B.A. Revised by Stanford M. Brooks, architect. Pp. 628. (E. & F. N. Spon. 3s.)

MATHESON'S AUSTRALIAN SAW-MILLER'S COMPLETE LOG AND TIMBER RECKONER. By D. Matheson. Pp. 120. (Crosby Lockwood & Son. 3s. 6d.)

LONDON AND DISTRICT BOROUGH COUNCILS.

Barnes.—The Council have passed plans lodged by Messrs. Neville & Crosse for alterations to Dunmow Hall, Station-road.

Bermondsey.—The Borough Surveyor is to carry out, for the London County Council, paving and other road-making works in connexion with the reinstatement after the construction of the bridge carrying Lower-road, Deptford, over the East London Railway. The cost will be 1,318*l.* 14s. Plans have been passed as follow:—Messrs. Stock, Page, & Stock, 9, Denman-street, London Bridge, S.E., five houses, Curlew-street, Horselydown; Mr. F. Fox, 56, Moorgate-street, E.C., new building in connexion with Bermondsey Medical Mission, Crimscott-street, Grange-road.

Chelsea.—The Town Clerk is to renew negotiations for the acquisition of property for the widening of Beaufort-street, on the west side between King's-road and Elm Park-gardens. The Michelin Tyre Company, Ltd., applied for consent to the erection of two projecting turrets in front of a proposed building on an island site in Fulham-road, at the corner of Sloane-avenue and Lucan-place. It is considered that the two turrets would form an architectural feature of distinctive character, and the application is to be granted.

Croydon.—Plans are to be prepared for a subway under the railway at Norwood Junction. The roadway of South Norwood is to be improved, at an estimated cost of 1,150*l.* The following plans have been passed:—Mr. G. Miller, twenty-six houses, Highbarrow-road; Mr. D. Weighman, twelve houses, Bensham-lane; Messrs. W. Smith & Sons, electric theatre, London-road.

Friern Barnet.—The following works are to be carried out by the firms named:—Mr. Thomas Adams, Wood Green, N., making up Oakleigh-park North, 5,534*l.* (engineer's estimate, 5,847*l.*); Mr. R. W. Swaker, Hounslow, making up Torrington-park, 2,461*l.* (engineer's estimate, 2,865*l.*); Messrs. Ground & Newton, Tottenham, drainage and tar-paving of paths round the park, 1,103*l.* (engineer's estimate, 1,130*l.*). Plans have been approved by the Council as follow:—Mr. Howard, sixteen houses, Loring-road; Messrs. Betstyle, Ltd., three houses, Park View-crescent; Mr. A. Auburn, twenty houses, Bramber-road; Messrs. Townsend, three houses, Milton-avenue.

Hampstead.—At their meeting on January 13 the Borough Council decided to engage Sir Alexander B. W. Kennedy to report on the future working of the electricity undertaking. The report is required in consequence of the probability of large additions to the plant at the generating-station being required in the near future.

Hanwell.—Milton-road is to be made up by Messrs. Clements, Knowling, & Co., the contract price being 887*l.* A portion of Uxbridge-road is to be treated with tar-macadam with a view to ascertaining the suitability of this material for the whole length of the road. Application is to be made to the Local Government Board for sanction to borrow money for acquiring land to widen York-passage.

Ilford.—Plans have been passed by the Council as follows:—Mr. E. T. Dunn, glass store, Britannia Works, Roding-street; Messrs. Rawlins, Culver, & Co., six shops and houses, 1-6, Carlton-parade, Green-lanes; Messrs. W. P. Griggs & Co., golf clubhouse, Wanstead Park-road.

Kensington.—The portion of Portobello-road, from Elgin-crescent southward to Western-terrace, is to be paved with 2-in. compressed asphalt, at an estimated cost of 420*l.* It is proposed to widen the churchyard footpath of Holy Trinity Church, Brompton, and alter the carriage drive on the north side of the church, at a cost of 400*l.*; also to make up the lane in continuation of Cottage-place, at an approximate cost of 495*l.*

Lewisham.—Tenders are to be invited for paving and forming Haseltine-road and Thornwood-road. In connexion with the reconstruction and widening of the bridge in Ravensbourne-street (Thurston-road) by the South-Eastern Railway, the Borough Surveyor, at the request of the engineer of the company, is to carry out the paving works. George-lane, from Hither Green-lane to Springrice-road, is to be paved as a new street. Plans have been passed as follows:—Messrs. Norfolk & Prior, twenty-nine houses in Duncrievie-road, Hither Green-lane, Brownhill-road, and Highclere-street; Mr. F. J. Gorham, addition to Heath Hill-house, Blackheath; Messrs. S. J. Jerrard & Sons, addition to District of Chislehurst Laundry, Horton-street; Mr. S. J. Tapley, stables at Holloway Farm, Bromley Hill.

Richmond-on-Thames.—385 sq. yds. of land at the rear of the public baths is to be purchased with a view to additions to the baths in the near future. The Council have decided neither to approve nor disapprove of plans lodged for a block of residential flats proposed to be erected on the Ancaster House estate. This will leave the proprietors free to put up the buildings at their own risk. There is local opposition to the scheme for the erection of the flats on the ground that they would interfere with the amenities of the neighbourhood.

Southwark.—The Borough Council have passed a plan lodged by Messrs. F. Matcham & Co., 9, Warwick-court, Holborn, W.C., in regard to the erection of a picture palace on the south-west side of Old Kent-road, adjoining No. 44.

Stoke Newington.—In view of the reduction in the market price of bricks, Messrs. John Knowles & Co., Ltd., who hold the existing contract to supply bricks, etc., to the Borough Council, were approached, and have agreed to reduce the price of Fletton bricks from 35s. to 25s. per 1,000, and stocks from 45s. to 35s. per 1,000.

Tottenham.—The Urban District Council has passed the following plans:—Messrs. Sage & Hope, three houses, Willoughby Park-road; Tottenham and Edmonton Gas Company, two petrol stores, Willoughby-lane; Messrs. Emden, Egan, & Co., picture palace, Frobisher-road; North Metropolitan Electric Power Supply Company, Ltd., substation, Hale-road. Messrs. Marshall & Griffin have lodged plans for 120 houses in three streets between Fairview-road and Highfield-road.

Westminster.—The pavements of Wilton-place and Swallow-street are to be repaired, at an estimated cost of 155*l.* The Works Committee have granted (subject to the usual sanction) an application from the Army and Navy Co-operative Society, Ltd., for permission to lay pneumatic tubes in 4-in. cast-iron pipes under the roadway of Artillery-row. A plan, lodged by Mr. C. F. Kearley, for the reconstruction of vaults in 24, Great Marlborough-street, has been passed.

PROJECTED NEW BUILDINGS IN THE PROVINCES.

ABERDOUR.—Pavilion shelter; County Surveyor, Fifeshire.

Alloa (N.B.).—Extensions to Ludgate School (2,000*l.*); Messrs. Wilson & Tait, architects, Lumley-street, Grangemouth.

Armagh.—Technical school, for the Urban District Council.

Ashton.—Parish offices, for the Guardians; Mr. J. Robinson, builder, Ashton.

Ayr.—House, St. Leonards-road (15,000*l.*); Mr. J. Drinnan, architect, 30, Wallace-street. House, Arran-terrace (1,200*l.*); Mr. A. C. Thomson, architect, Wellington-chambers, Ayr.

Ballymena.—Schools (6,000*l.*); Mr. J. Hanna, architect, Ocean-buildings, Belfast; Messrs. McIntyre Brothers, builders, Belfast.

Ballymote.—Chapel; Rev. Canon Connington.

Barry.—School, Weston Hill (8,000*l.*); Mr. G. A. Birkenhead, architect, 104, St. Mary-street, Cardiff.

Belvedere (Kent).—Church of St. Augustine (7,000*l.*); the Vicar.

Blackburn. — Eighteen houses, Warcock Green; Borough Surveyor, Blackburn.

Blackpool.—Offices, Sefton-street; Messrs. Smith & Sons, builders, Coleridge-road, Blackpool.

Bristol.—Extensions to casual wards (1,800*l.*); Mr. S. Lovell, builder, Bristol.

Briton Ferry.—Public hall and institute (5,000*l.*); Mr. H. A. Clarke, architect, Briton Ferry.

Bromley.—Pavilion, Queen's Mead; Mr. Woodham, builder, Bromley.

Cathcart.—Additions to laundry, Hamilton-place; Cathcart Laundry Company, Ltd., Cathcart, N.B.

Coedybrain.—New schools; Mr. D. P. Jones, architect, Cooke-street, Cardiff.

Colchester.—Market buildings; Borough Surveyor, Town Hall, Colchester.

Cold Hesledon.—Farm buildings; South Hetton Coal Company, Ltd.

Dalkeith.—Additions to poorhou. '1,500*l.*); Parish Council.

Dewsbury.—Engine-house, Meadow-road, for Messrs. A. Hirst & Sons, Ltd.

Dollis Hill. — Proposed church (St. Catherine's); Rev. F. Wayland Joyce, Rural Dean.

Exeter.—Additions to St. John's Hospital School; Messrs. C. E. Ware & Son, architects, Bedford-circus, Exeter.

Fife.—Additions to I.D. Hospital (15,000*l.*): Mr. E. Simpson, architect, 16, King-street, Stirling.

Giffnock.—Clubhouse, Williamswood Golf Club; Secretary, Giffnock.

Greenfield.—Twelve cottages, Greenfield Co-operative Society, Ltd.

Halifax.—Business premises, Harrison-road (1,800*l.*); Mr. J. T. Dalton, architect, Victoria-street, Halifax. Mackintosh's confectionery works (2,500*l.*); Mr. Medley Hall, architect, 1, Harrison-road, Halifax.

Hucknall Torkard.—Skating-rink; local syndicate.

Jarrow.—Secondary school (15,000*l.*); Mr. F. Rennoldson, architect, Union-chambers, South Shields; Mr. T. Lumsden, builder, Albert-road, Jarrow.

Keighley.—Motor garage (1,000*l.*); Mr. D. Weatherhead, architect, Keighley.

Linton.—Isolation hospital; Clerk to the Rural District Council.

Liverpool.—Church; Messrs. Thornton & Co., builders, Liverpool. New students' union; Mr. C. H. Reilly, architect, School-lane, Liverpool; Messrs. Brown & Backhouse, builders, Chatham-street, Liverpool. St. James Schools (Cathedral) (7,000*l.*); Messrs. G. Bradbury & Son, architects, Cook-street, Liverpool; Messrs. R. Wearing & Sons, builders, West Derby, Liverpool.

Lowestoft.—The following plans have been passed by the Town Council:—Additions and alterations to Mariners' Inn, Mariners-road: Messrs. E. & G. Morse; four houses, Winnipeg-road, Mr. W. Beaumont; three houses, Albany-road, Mrs. S. E. Saunders.

Marlborough. — Wesleyan church; Mr. Cripps, builder, Marlborough.

Merthyr—Masonic hall; Mr. C. M. Davies, architect, 112, High-street, Merthyr.

Newcastle.—Extensions to St. John's Church schools (3,000*l.*); Mr. C. S. Errington, architect, Victoria-buildings, Grainger-street, Newcastle.

Newcastle-under-Lyme. — Laboratory, etc.; Mr. S. Wilton, builder, Newcastle-under-Lyme.

New Mills.—Skating-rink; local syndicate.

Oswestry.—Almshouses; Borough Surveyor, Oswestry.

Oxhey.—Parish hall, Pinner-road, for the Building Committee.

Poole.—Court Hill School (5,000*l.*); Messrs. Jones & Seward, builders, Bournemouth. Langland School; Mr. G. F. Iremy, builder, Poole.

Port Talbot. — Wesleyan mission hall (3,000*l.*); Messrs. Green, Knowles, & Russell, architects, Adelphi-chambers, Liverpool.

Reading.—Hall, St. Luke's Church (1,500*l.*); Mr. S. S. Stallwood, architect, Market-place, Reading.

Renfrew.—Municipal buildings (2,250*l.*); Mr. A. R. Paterson, Borough Surveyor.

Runcorn.—Three blocks of cottages; Governors of the Cottage Hospital.

Sandfields.—New schools; Mr. D. P. Jones, Cooke-street, Cardiff.

Sheffield.—Sheds at the Worthing-road depôt (1,835*l.*); Messrs. George Longden & Sons. Chapel, etc., High Wincobank Estate; Sheffield Congregational Association. The Town Council has passed the following plans:—Thirty houses, Exley-avenue, Mr. Jos. Exley; additions to premises, Mitchell-street, for the Pelham Foundry Company; addition to premises, Washford-road, Messrs. W. Cooke & Sons, Ltd.; additions to premises, Rutland-road, Messrs. Burys & Co. Ltd.; house and stores, Main and Waverley-roads, for the Brightside and Carbrook Co-operative Society, Ltd.; additions and alterations to premises, Cavendish-street, Messrs. Isaac Ellis & Son; addition to premises, Cemetery-road, Messrs. F. Ashton & Son; alterations to skating-rink, Attercliffe-road, for the Attercliffe Roller Skating Rink Company, Ltd.; additions and alterations to premises, London and Chipping-house roads, Messrs. C. Black & Sons, Ltd.; additions and alterations to premises, Abbey-dale-road, Messrs. J. Abey & Son; alterations, Old Cherry Tree Hotel, Gibraltar-street, Messrs. Tennant Brothers, Ltd.; additions and alterations, Crown Inn, Attercliffe Common, Messrs. D. Gilmour & Co., Ltd.; additions and alterations, Wheat Sheaf Inn, Effingham-street, Messrs. D. Gilmour & Co., Ltd.; P.M. church, Owler-lane and Selby-road, Rev. J. Hague; additions and alterations to premises, Sydney-street, Messrs. J. H. & T. A. Hardy; additions and alterations, Brincliffe Oaks Hotel, Nether Edge-road and Oakhill-road, Messrs. Tennant Brothers, Ltd.; additions to premises, Newhall-road, Messrs. Sanderson Brothers & Newbould, Ltd.; three houses, Dobbin Hill-road, Mr. C. H. Cherry; four houses, Grove-road, Mr. Thomas Lees; four houses, Chesterfield-road, Mr. J. Laver; thirty-four houses, Cartmell and Todwick roads, Mr. J. Sivil; six houses, London-road, Mrs. Forcitt; additions and alterations, Firvale Workhouse, Sheffield Board of Guardians; four houses, Springvale-road, Mr. T. Church; additions and alterations, Adelphi Hotel, Adelphi-street, Messrs. W. Stones, Ltd.; four houses, Scarsdale and Woodseats roads, Mr. J. Enock; twelve houses, Arthington-street, Bradbury-street, and Valley-road, Mr. Robert Arthington's Trustees; theatre, Bramall-lane, the Olympia Skating Rink Company, Ltd.

Skipton.—Extension to cotton mill (2,000*l.*); Mr. J. Hartley, architect, Skipton.

Southampton.—Alterations and addition to fish market (1,200*l.*); Mr. J. A. Crowther, Borough Engineer, Southampton. The following plans have been passed by the Town Council:—Offices, Belvidere-road, Messrs. Weston & Burnett; additions to laundry, Romsey-road, Mr. R. Mackintosh; chapel and dormitories, Hill-lane, Messrs. A. Wright & Son; nine houses, Arnold-road, Messrs. Lemon & Blizard; motor-car house, Banister-road, Mr. F. G. Paul; three houses, Church-lane, Mr. F. Lowe.

Stirling.—Municipal buildings, for the Town Council (20,000*l.*); Mr. E. Simpson, architect, 16, King-street, Stirling.

Stockbridge.—Additions to Council offices; Council Surveyor.

Tenter Banks (Staffs.).—Schools (4,646*l.*); Mr. W. Hutchings, architect, Stafford; Mr. F. Lindsay Jones, builder, Wolverhampton.

Thornhill (Yorks).—New offices; Yorkshire Electric Power Company, Ltd.

Troon (N.B.).—Church (4,000*l.*); Messrs. Francis & Webster, architects, 17, S. Castle-street, Edinburgh.

Uckfield.—Laboratory; County Architect, Lewes, Sussex.

Walgrove.—School; Messrs. Sharp & Robinson, builders, Earls Barton, Northants.

Walton-le-Dale.—School in connexion with Our Lady and St. Patrick's R.C. Church.

West Stanley.—Skating-rink (2,000*l.*); Mr. T. E. Crossling, architect, Front-street, Stanley, Durham.

Whittington.—Council school; Mr. W. Hutchings, architect, Stafford; Mr. E. J. Chattle, builder, Lichfield.

Willowtown (Ebbw Vale).—Two schools, Talliston; Mr. Henry Water, Merket-chambers, Ebbw Vale.

Winchester. — Skating-rink, Station-hill; Messrs. Barrett & Driver, architects, 19, High Holborn, W.C.

Wrexham.—Corn Exchange, Queen-street (3,000*l.*); Mr. J. England, Borough Surveyor, Wrexham.

Yarmouth.—Offices at Fish Market (1,450*l.*); Messrs. J. W. Cockrill, Borough Surveyor. Head Master's residence, Beaconsfield-road; Governors, Yarmouth Grammar School Foundation. Presbyterian church, junction of Trafalgar-road and Nelson-road; the Trustees. The Council have passed a plan for alterations to chapel, High-street, Gorleston, for the Congregational Trustees.

METROPOLITAN ASYLUMS BOARD.

AT the fortnightly sitting of the Metropolitan Asylums Board on Saturday last week, the following, amongst other matters, were dealt with:—

Orchard Hospital.—The Hospitals Committee submitted plans prepared by the Engineer-in-Chief for the following works at the above hospital:—(*a*) Adaptation of a ward to provide discharge accommodation and a clothing store; (*b*) addition of two baths to the male staff change-rooms; and (*c*) providing a shelter for bedding awaiting disinfection.—It was decided that the Works Committee should be authorised to make arrangements for carrying out the works at short notice when the Hospitals Committee considered it prudent.

Other Works.—It was decided, subject to the approval of the Local Government Board, to erect a gate porter's lodge at Long Reach Hospital; to provide a glazed verandah against the front of the waiting-room at the Western Hospital; and to relay in oak the floors of the dormitories of pavilions 3 and 4 at the Northern Hospital.

Quantity Surveyors.—Messrs. Bartlett & Ross, Bream's-buildings, Chancery-lane, W.C., were appointed to take out the quantities of the proposed cleaning and painting works and repairs at the Eastern Hospital, and Mr. L. Jacob, of 493, New Cross-road, to take out the quantities for the proposed works at Park Hospital. In each case the commission will be at the rate of 2½ per cent. on the amounts of the accepted tenders.

Seaside Homes, Margate.—A report was submitted by the Children's Committee that, subject to the consent of the Local Government Board, the freehold property adjacent to East Cliff House, Margate, known as the Chateau Bellevue, be purchased for 2,350*l.* In their report the Committee referred to the advantages which would accrue from the disposal of the old portion of East Cliff House, and the concentration of the institution within one large valuable and compact site.

General Building News.

NEW CHURCH, GRINDLEFORD, DERBYSHIRE.

The foundation-stone was recently laid of the new church of St. Helen, which is to be erected in the Grindleford district of Derbyshire. At present only the chancel, south chapel, and vestries, together with a temporary nave, to seat about 160 persons, are being built. The cost of this portion of the scheme will be about 2,500*l.* The church, when completed, will accommodate 500. Mr. E. R. Sutton is the architect.

SECONDARY SCHOOL FOR GIRLS, YORK.

A new secondary school for girls has been erected by the York Corporation Education Committee. The new building, which occupies a site in Sycamore-terrace, in the vicinity of the river, has a frontage of 202 ft. It is flanked by two wings which extend on each side of the front entrance, and spread some distance beyond the main building at the rear, thus forming three sides of a square. The square is surrounded by gravelled terrace walks, terrace steps leading to the gardens, which are laid out for botanical purposes, and with four tennis-courts. Between these and the river bank are the hockey and playing fields. The main block is of two stories, and comprised in the building are a large assembly hall, a chemical laboratory, domestic science block, and dining hall, library, lecture theatre, ten classrooms, and rooms for the staff. The school and grounds comprise several acres, and the total cost is about 20,000*l.* The architect is Mr. W. H. Brierley, of Lendal, York, and the clerk of works Mr. F. W. Cotton. The general contractors are Messrs. Wm. Airey & Son, of Leeds, and the subcontractors were:—Mr. Dobson, tiler; Mr. Shouksmith, blacksmith work; Mr. Bellerby, painter; Mr. Cram, plaster; York Corporation Electricity Department, electric lighting. The building has been fitted throughout with Osram lamps.

ADULT SCHOOL, SUTTON, SURREY.

An adult school has been erected at the corner of Benhill-avenue and Lichfield-road, Sutton. The area covered by the building is 8,250 sq. ft. The main hall is 66 ft. long by 37 ft. wide. Opening from it on either side are classrooms, which are so arranged that they can, if desired, be divided off from the hall by curtains, and from each other by means of sliding partitions. When these are used in connexion with the hall there is an auditorium accommodating 650 persons. An organ-chamber is provided, and also cloakroom accommodation for both sexes in close proximity to the principal entrance, while at the platform end there is a vestry and a ladies' parlour. A kitchen is also provided. In addition there is at the rear a gymnasium, and on the first floor a committee-room, games-room, and reading-room. The architects were Messrs. Frederick Wheeler, Son, & Searle, of Lincoln's-inn, W.C., and the builders Messrs. F. & H. F. Higgs, of Herne Hill, S.E.

BOARD SCHOOL, STEELEND, FIFESHIRE.

A new school, to accommodate 150 pupils, but capable of expansion, has been opened at Steelend. The building has cost some 3,000*l.* to erect, and was designed by Mr. John Houston, architect.

GRAMMAR SCHOOL, MELTON.

A new County Grammar School, the King Edward VII., was opened at Melton Mowbray on the 13th inst. by the Chairman of the Leicestershire County Council. Externally the buildings are faced with medium red pressed bricks, with dressings in salmon buff terra-cotta, while the roofs are covered with light sea-green Westmorland slates. The nominal accommodation is for 150 scholars, though, allowing for subdivision, the actual seating capacity of the ordinary classrooms amounts to 174. Three of these rooms are for thirty children, two for twenty-four, and two for eighteen. In addition there is a science laboratory on the first floor, and a large north-lighted art-room in the upper part of the central block; a cookery-room and a manual training room for instruction in woodwork, etc. A small dining hall communicating with the cookery-room is provided for the use of scholars from the outlying districts. The floors and staircases are all constructed of fire-proof materials. The windows are all steel frames, with plaster and tiled linings. Glazed tiled dados are run round the classrooms, and a panelled dado round the central hall in pitch-

pine and canary wood. The tower, besides containing the clock and the school bell, is used as a storage for water for the science-room. Mr. E. Shelbourne was the architect of the building.

ELEMENTARY SCHOOL, BLACKWOOD, EBBW VALE.

A new elementary mixed school has been opened at Blackwood by the Managers of the Tredegar group of Council schools. The school comprises a mixed department for 350 boys and girls, exclusive of cookery classroom. The rooms consist of six classrooms, five of which open direct on to a central hall 56 ft. long by 24 ft. wide, together with commodious cloak-rooms, lavatories, and entrance vestibules, also a large cookery kitchen for girls and teachers' room. The heating throughout is by means of large open fireplaces and a low-pressure heating system. Mr. F. Bond, of Cardiff, was the builder, the cost of the work being a little over 6,500*l.*, and Messrs. James & Morgan, Cardiff, were the architects, assisted in the superintendence by Mr. E. Evans, clerk of works, of Gilfach, Bargoed.

CHURCH SCHOOL, ROYDON.

A new non-provided school has been opened at Roydon, Castle Rising. The architects of the new building were Messrs. Lacey & Upcher, and the builder was Mr. Seaman, of Roydon.

GABALFA, NEAR CARDIFF.

Plans for a new school at Gabalfa, near Cardiff, has been approved by the Glamorgan Education Committee, and will be erected forthwith under the supervision of the County Architect, Mr. D. Pugh Jones. This is a suburb of Cardiff, and the population is increasing very rapidly.

NEW TOWN HALL, LANCASTER.

On the 27th ult. Lord Ashton formally handed over to the Mayor and Corporation of Lancaster the new Town Hall which he has built. The main façade of the building fronts Dalton-square. The main entrance affords admission to a vestibule, leading to a marble staircase. The walls are wholly cased in marble. The staircase leads directly to the entrance to the new Council-chamber. Close at hand is the Town Clerk's department and robing-rooms for the members of the Council. Facing Dalton-square is a suite of apartments destined for use as a banqueting and reception room, and as the Mayor's parlour. All the rooms are panelled. Provision is made for the three rooms to be thrown on occasion into one, forming a hall 128 ft. long and 30 ft. wide. Several committee-rooms are provided. On the ground floor are a series of offices, conveniently arranged, and mostly with separate entrances from the surrounding streets. An airy police court is provided, and close at hand is a police department, with messrooms and dayrooms for the constables, a charge office, and five cells for males and two for females. An important feature is a great public hall, capable of seating 2,500 persons. An organ, which has cost 3,000*l.*, occupies a position at one end. The floor is mounted on springs, so that this also may be used at need for a ball. Underneath this hall is a large apartment, 92 ft. by 60 ft. in dimensions, which is intended primarily for a police parade-room. The cost is stated to have amounted to 155,000*l.* The architect selected was the late Mr. E. W. Mountford, of London, but since his death the erection has been carried through by his partner, Mr. F. D. Clapham, with Mr. M. Hague as clerk of works.

MARKET HALL, SARATOFF.

According to the *Novoe Vremia*, St. Petersburg, of December 24, an English company has undertaken the construction and equipment of a market hall at the town of Saratoff at a cost of some 400,000 roubles (about 42,000*l.*). The hall is to be a lofty building, with a complete glass roof and one-stories shops, the latter fitted with water supply, &c., and cold storage premises beneath the shops.—*Board of Trade Journal.*

BURSLEM PUBLIC BUILDINGS.

The Burslem Town Council have approved the plans for the new public buildings proposed to be erected in Wedgwood-place, prepared by Messrs. Russell & Cooper, and have accepted the tender of Messrs. Arnold & Sons, of Doncaster, amounting to 24,918*l.*, for the erection of the buildings.

HOSPITAL, EALING.

The General Committee of the new Ealing Hospital propose to start work shortly on the erection of a part of the new building. That portion includes two large wards, each containing eighteen beds, two small single-bed wards, kitchen block, operating block, casualty block, and two-thirds of the administrative block. When complete the hospital will be able to accommodate eighty-eight beds. Early in the autumn, six firms were invited to tender for the building of the hospital, and Mr. Dickens's tender of 16,526*l.*, which was the lowest, was accepted, the highest amounting to 18,318*l.* The services of Mr. Edwin Hall were engaged for the purpose of arranging a competition in regard to the design of the hospital. Seventeen architects, resident or in practice in Ealing, competed, and the award of Mr. Hall went to Messrs. Hall-Jones & Cummings, whose plans were accepted.

Appointment.

NEWCASTLE-ON-TYNE.

Mr. William Jones Steele, Deputy City Engineer and Surveyor, Bristol, has been appointed, with a salary of 800*l.* per annum, City Engineer of Newcastle, in succession to Mr. C. R. S. Kirkpatrick, who has been appointed Assistant Engineer to the Port of London Authority.

Sanitary and Engineering News.

THE RURAL DISTRICT OF EASINGTON.

Dr. R. W. Johnstone, in a report to the Local Government Board on the sanitary circumstances and administration of the Rural District of Easington, gives a very bad account of the state of the dwellings of the working classes, mostly colliers, of the district. The following is a quotation from his Report:—"The internal construction of many of the older houses leaves much to be desired. In the worst cases the floors are constructed of quarls (a local tile) laid in ashes, affording a damp and uneven surface; the roofs of pantries are without ceilings, and there is no staircase, access being obtained to the upper floor by means of a ladder passing through a hole in the ceiling of the room below. It is in the construction and arrangement of the upper or bedroom floors that faults liable to have a deleterious effect upon the health of the occupier are most evident. The bedrooms are constructed almost entirely within the slope of the roof. Sometimes the wall plate is only a few feet from the floor, and the window, upon which the apartment depends for light and ventilation, is necessarily limited to this height. The ridge of the roof may be anything from 6 ft. to 9 ft. from the floor, but the space above the wall plate is of little use for ventilation; it acts rather as a trap for spent air charged with organic particles given out by those who have breathed it. Moreover, the spent air from the room below is afforded ready access by way of the hole in the floor, and this tends to make the atmosphere in the attics exceedingly foul and close. The attic, as a rule, is without any ceiling, and the walls are often dilapidated. Sometimes there are two rooms on the upper floor, one opening out of the other, one lighted by the window at floor level, and the other by a skylight which does not open. The provision of staircases, ceilings, and dormer windows in such houses as these would go far to remedy the worst of these defects, and the cost would not be prohibitive. The dormer windows would, however, require to be carried up to the ceiling level, and to be free from obstructive beams."

ROYAL SANITARY INSTITUTE.

This Institute announces its forty-ninth course of lectures and demonstrations for sanitary officers, to be given from February to April. The course comprises four lectures on elementary physics and chemistry in relation to water, soil, air, and ventilation and meteorology, and twenty-one lectures on public health statutes; orders, memoranda, and model by-laws of the Local Government Board and the by-laws in force in the administrative County of London; the practical duties of a sanitary inspector; municipal hygiene; building construction in its sanitary relations, etc. The museum of sanitary apliances and the library are open free to students attending the course. Arrangements are made by which students can obtain the loan of books for a small payment. Further particulars can be obtained from Mr. E. White Wallis, Secretary, at the Society's new offices at 90, Buckingham Palace-road, S.W.

SEWAGE WORKS, BRENTWOOD, ETC.

At the meeting of the Billericay Rural Council on the 18th inst. the tender of Messrs. W. & C. French, of Buckhurst-hill, at 18,040*l.* 13s. 3d., was accepted for the execution of a system of sewage works for the joint districts of Brentwood, Shenfield, and South Weald.

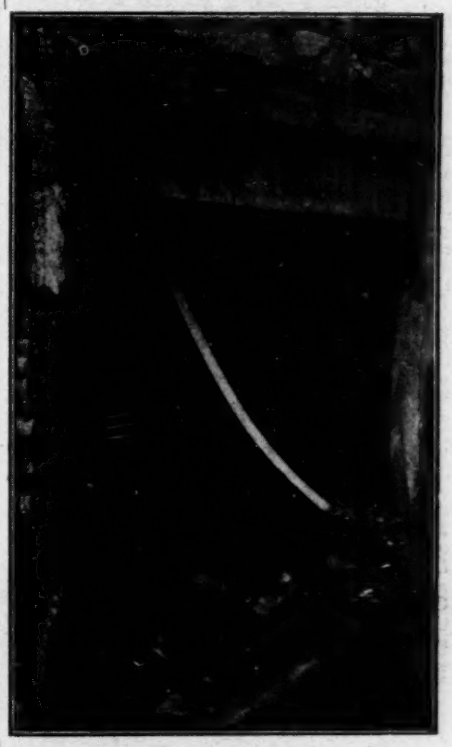
Miscellaneous.

PROFESSIONAL AND BUSINESS ANNOUNCEMENTS.

Mr. William H. Thorp, architect, of Phœnix-chambers, South-parade, Leeds, has taken his son, Mr. Ralph W. Thorp, A.R.I.B.A., into partnership. The name of the firm in future will be William H. Thorp & Son, and they will continue to practise as architects at the above offices as heretofore.——Mr. Eustace L. Haynes, architect and surveyor, has removed his offices from 124, Newgate-street, E.C., to 120 in the same street. Telephone number as before—Holborn, 2390.——Mr. Louis Jacob, F.S.I., quantity surveyor, has removed his offices to Raymond House, Theobalds-road, Gray's-inn, W.C.

THE CLAPHAM FIRE.

In reference to our remark in regard to this fire, that "if proper armoured doors had been used in connexion with these buildings and had the floors held out, much loss of life and property might have been prevented," Messrs. Arthur L. Gibson & Co., the Patentees of the Kinnear Patent Steel Rolling Shutters, send us the accompanying photograph of one of these shutters, in an opening 10 ft. 6 in. high and 7 ft. wide, taken immediately after the fire at



One of the Kinnear Steel Rolling Shutters, photographed in position after the Clapham fire.

Messrs. Arding & Hobbs's premises, which was uninjured by the fire, only bent as shown by falling joists and masonry. They claim that this shows that had all the openings in the division walls been fitted with these shutters, as passed by the London County Council, it would have been impossible for the fire to have passed through the openings from one building to another. The photograph seems to confirm this view.

ABERDEEN GRANITE AND QUARRYING INDUSTRIES.

The year just closed has, says the *Aberdeen Free Press*, brought a welcome and long overdue tinge of brightness and encouragement. Unfortunately this cannot be said to be due to any increased activity in the building branch, for neither at home nor abroad can any substantial improvement be said to have taken place. It is the monumental department, then, which has to be thanked for the betterment which reports show has been enjoyed. The home trade has neither been brisk nor remunerative, but the foreign demand has been maintained keen and encouraging. There were no big contracts abroad of any note, and the close cutting of prices which has to be resorted to, as the result of present-day rivalry and competition between countries, is not conducive to the best interests of the granite merchants, who, however, realise that unless they are prepared to accept smaller profits, the only alternative open to them is to shut their works, which would entail misery and distress to those who at present they employ. Nevertheless

the fact remains that an improvement has been experienced, and it shows signs of growing during the coming year. With regard to quarrying, the same journal remarks that in the earlier part of the year there was nothing on which those engaged in quarrying could congratulate themselves, but as time progressed matters bettered to an encouraging and satisfactory extent. All the more pleasing was the improvement from the fact that it embraced a keener demand for building material, the building trade having been lying so dormant that such a result was scarcely anticipated. This increase on hitherto limited orders for building stones was confined to the last few months, when the state of trade took a turn which gave hope of even better things to follow.

THE TATE GALLERY.

Sir Herbert von Herkomer has presented to the Tate Gallery, Millbank, his large picture, exhibited in the Royal Academy rooms in 1908, of "The Council of the Royal Academy, 1907."

GOVERNMENT CONTRACTS.

The following tenders have been accepted during the past month by the Government Departments named:—Admiralty, Director of Works Department—Portland cement for harbour of refuge works, Peterhead, Associated Portland Cement Manufacturers (1900), Ltd., Portland House, Lloyd's-avenue, E.C.; Wouldham Cement Company, 35, Great St. Helens, E.C.; works services, additional messing and latrine accommodation, etc., Barton's Point, Sheerness, Messrs. G. Gates & Sons, Frinsbury, Rochester; dolphins, mooring at Fairham Lake, Portsmouth Harbour, Cubitt Concrete Construction Company, 260, Gray's Inn-road, W.C.; extension of electric light and power station, Priddys Hard, Portsmouth, Mr. John Hunt. South Wharf, Cleveland-road, Gosport; steelwork for new roof over extension of water-tube boiler shop and G.M. store, H.M. Dockyard, Malta, Messrs. F. Morton & Co., Ltd., Hamilton Iron Works, Garston, Liverpool; for extension of boiler-house, H.M. Dockyard, Portsmouth, Messrs. Redpath, Brown, & Co., Ltd., Riverside Works, East Greenwich, S.E. War Office—Works services, additional accommodation, Wellington Barracks, London, Messrs. James Smith & Sons, Ltd., Junction Works, South Norwood, S.E.; drainage work, Ballykinler, Camp, Co. Down, Mr. D. A. Jardine, Dundrum, Co. Down; erection of married soldiers' quarters, Hythe, Messrs. G. E. Wallis & Sons, Ltd., Broadmead Works, Maidstone; erection of married soldiers' quarters, St. Peter's Barracks, Jersey, Mr. C. Lequesne, 14, Le Geyt-street, St. Helliers, Jersey; erection of nurses' quarters, isolation hospital, Curragh, Messrs. H. Laverty & Sons, Ltd., 12, Cambridge-street, Belfast; erection of quarters, stabling, etc., Curragh, Mr. T. J. Llewellyn, Newbridge, Co. Kildare; erection of river wall, etc., Royal Dockyard, Woolwich, Mr. B. E. Nightingale, Albert Embankment, S.E.; erection of tray stoves, Royal Gunpowder Factory, Waltham Abbey, Mr. B. E. Nightingale, Albert Embankment, S.E.; extension of Hilton rifle range, Mr. J. Beaty, Strand-road, Carlisle; periodical works services, Dover Castle, Messrs. A. Bagnall & Sons, Market-street, Shipley; Shorncliffe, Mr. T. E. Holdsworth, 32, Saltaire-road, Shipley. Office of Works—Builders' work, Houses of Parliament, alterations to kitchen, Mr. J. S. Carmichael, 331, Trinity-road, Wandsworth, S.W.; adaptation of Halifax Labour Exchange, Messrs. Fielding & Bottomley, South-parade, Halifax; enlargement of Western District P.O., and Mayfair Telephone Exchange, Messrs. Howell J. Williams, Ltd., 11, Bermondsey-street, S.E.; adaptation of Leeds Labour Exchange, Messrs. John Wood & Son, Bank-buildings, Hyde Park, Leeds; erection of new fan-house, Natural History Museum, Messrs. F. & H. F. Higgs, Station Works, Hinton-road, Herne-hill, S.E.; extension, Royal Courts of Justice, Messrs. Spencer, Santo, & Co., Ltd., 22 and 24, Kensington High-street, W.; enlargement, South Tottenham S.O., Mr. E. G. Brown, 145, Hertford-road, Lower Edmonton, N.; structural work of new galleries, Royal Scottish Academy, Mr. Colin McAndrew, Lauriston-gardens, Edinburgh; steelwork, Royal Scottish Academy (new galleries), Messrs. Bladen & Co., Ltd., Parkhead Girder Works, Glasgow; heating and domestic hot water service, South Kensington new B. Post Office, Messrs. Wenham & Waters, Paragon Works, Croydon; hydraulic lifts, South Kensington, new P.O., Messrs. A. & P. Steven, Provanside Engine Works, 181, St. James-road, Glasgow; locking gear for lifts, P.O. buildings, Messrs. A. & P. Steven, 231-2, Strand, W.C. Commissioners of Public Works, Ireland—Adaptation of premises to Labour Exchange, Belfast, Messrs. T. & W. Lowry, 219A, Woodstock-road, Belfast; new Customs buildings, Fenit, Co. Kerry, Messrs. John Ryan & Son, 34, Thomas-street, Limerick. Office of Woods, etc.—Roadmaking at Ockshott, Surrey, Messrs. Stephen Kavanagh & Co., Surbiton Hill, Surrey.

THE LOCAL GOVERNMENT ANNUAL.

"The Local Government Annual and Official Directory" for 1910 is the nineteenth year of publication of a useful and reliable little guide, the accuracy of which we had tested on many occasions. It contains information, officially corrected, as to all the Local Government authorities in London, including a list of names of District Surveyors of London, with their districts, and similar information relating to the country. The annual is edited by Mr. S. Edgecumbe Rogers, published at the "Local Government Journal" office, 27A, Farringdon-street, E.C., and the price is 1s. 6d.

PAVING IN LONDON.

An interesting return has been issued by the Poplar Borough Council showing the proportion per cent. of the carriageways paved in the various methods in the Metropolitan Boroughs. The particulars are as follows:—Battersea (a), asphalt (figures not available); (b) wood, 8.6; (c) granite setts, 2.0; (d) macadam, 89.4; (e) cost of maintenance and repair per mile of street (including loan charges except where starred), 105*l.** Bethnal Green (a), 11.1; (b), 8.7; (c), 40.8; (d), 39.4; (e), 382*l.* Camberwell (a), 2.3; (b) 10.9; (c), 2.3; (d), 84.5; (e), 389*l.* Chelsea (a), 7.0; (b), 16.0; (c), 4.9; (d), 71.0; (e) 519*l.* Deptford (b), 3.4; (c), 9.9; (d), 86.3; (e), 186*l.* Fulham (a), 1.4; (b), 20.5; (c), .1; (d), 78.0; (e), 188*l.** Greenwich (a), nil; (b), 1.8; (c), 6.9; (d), 91.3; (e), 225*l.* Hackney (a), .9; (b), 10.1; (c), 4.8; (d), 82.0; (e), 278*l.** Hammersmith (a), 1.3; (b), 19.4; (c), .2; (d), 79.1; (e) 247*l.* Hampstead (a), nil; (b), 15.2; (c), 4.5; (d), 80.3; (e), 477*l.* Holborn (a), 54.8; (b), 7.8; (c), 28.2; (d), 9.2; (e), 561*l.* Islington (a), 1.6; (b), 4.8; (c), 9.7; (d), 83.9; (e), 297*l.** Kensington (a), 4.1; (b), 17.6; (c and d), 78.3; (e), 361*l.* Lambeth (a), 4.9; (b), 15.4; (c and d), 79.7; (e), 390*l.* Lewisham (b), 1.4; (c), 1.9; (d), 96.7; (e), 306*l.* Paddington (a), 2.8; (b), 19.8; (c), 13.6; (d), 63.8; (e), 513*l.* Poplar (a), 3.5; (b) 15.4; (c), 21.0; (d), 60.1; (e), 464*l.* Marylebone (a), 3.2; (b) 29.2; (c), 18.3; (d), 49.3; (e), 1,066*l.* St. Pancras (a), 2.5; (b), 14.7; (c), 24.3; (d), 53.5; (e), 435*l.* Shoreditch (a), 11.3; (b), 5.7; (c and d), 83.0; (e), 293*l.* Southwark (a), 18.7; (b), 19.3; (c), 14.3; (d), 47.7; (e), 609*l.* Stepney (a), 2.8; (b), 4.1; (c), 61.4; (d), 31.7; (e), 261*l.** Stoke Newington (b), 14.7; (c), 11.7; (d), 73.6; (e), 298*l.* Wandsworth (a), .1; (b), 7.8; (c), 1.0; (d), 91.1; (e), 294*l.* Westminster (a), 22.5; (b), 39.3; (c), 11.2; (d), 27.0; (e), 802*l.* Woolwich (b), .3; (c), 6.8; (d), 92.9; (e), 317*l.* City of London (a), 48.2; (b), 37.6; (c), 13.8; (d), .4; (e), 958*l.*

PREHISTORIC ANTIQUITIES FROM PERU.

It is stated that a gift will be made, anonymously, to the British Museum of the large collection, gathered by Mr. T. Hewitt Myring in the Chimcana Valley, of pottery vessels found in a tumulus, the age of which is estimated to be from 2,000 to, it may be, 7,000 years. The ware is ornamented with beautifully and faithfully worked designs of human figures, animals, and birds which indicate a highly-advanced stage of civilisation. The vessels are finely preserved; their good state is ascribed to the saltpetre deposits in the earth in which they were laid. The exhibits consist mostly of water-bottles, but there are several bowls and horns, and a vase, 18 in. high, in human shape, all fashioned without the use of the potter's wheel.

Law Reports.

CASE UNDER THE PUBLIC HEALTH ACT.

THE case of Whitehorn *v.* Smelt came before a Divisional Court of King's Bench, composed of the Lord Chief Justice and Justices Bucknill and Bray, last week, upon the appeal of the plaintiff, the Clerk to the Whitley and Monkseaton Rural District Council, from a decision of the justices of Northumberland, dismissing a summons against the defendant, a showman.

Mr. Palmer, for the appellant, said the question was whether a structure of canvas and poles of a portable nature, and which could easily be removed in a very short time, could be described as a building within the meaning of sect. 27 of the Public Health (Amendment) Act, 1907. The structure in question was called a "hoop-la," which was a game in which people threw rings on hooks, etc., for prizes. It appeared that the structure was put up near the promenade at Whitley Bay. Before the justices the appellant contended that the structure was a temporary building which should be controlled by the local authority; but on behalf of the respondent it was urged that it was a portable structure and exempt from the control of the local authority, it not being the kind of building contemplated by the section.

Mr. Justice Bucknill said the thing could be put up and taken down in a quarter of an hour.

Mr. Palmer: It is obvious that there are no sanitary arrangements here.

Mr. Justice Bucknill: Nor is there any entrance or exit, because everybody stands outside.

Mr. Palmer suggested that the protection of the structure from fire was a matter for the local authority, and the local authority should also have the power to make the owner fix it up strongly so that the public were not placed in danger of its being overturned.

In the result, their lordships held that the structure was not a temporary building within the meaning of the section, and dismissed the appeal with costs.

LONDON BUILDING ACT.

AT the Clerkenwell Police Court a few days ago the Cannon Brewery Company, Ltd., of 156, 158, and 160, St. John-street, Clerkenwell, were summoned, before Mr. d'Eyncourt, by the London County Council, for not having provided means of access to the roof of the Rising Sun, Euston-road, in case of fire.

Mr. Chilvers, who appeared for the Council, argued that the building in question came within sect. 12 of the London Building Acts Amendment Act, 1905, that it was a building having more than two stories above ground, and exceeding 30 ft. in height. It was also argued that the premises were not a dwelling-house occupied as such by not more than two families, and for that reason means of escape by the roof should be provided.

For the defence, photographs were produced clearly showing that the premises had no projecting front. It was contended that the premises, which were used both for residential and business purposes, did not come within the meaning of the Act, and that having regard to the fact that there were less than twenty persons resident therein the Council had no power to insist upon the provision of access to the roof.

The magistrate, in giving his decision, held that the premises were a dwelling-house, but because they happened to be used for the purposes of business it was no less a dwelling-house. He found, in addition, that less than twenty persons resided on the premises, and that it had not a projecting front within the meaning of sect. 10. He therefore dismissed the summons, allowing the defendants 10*l.* 10s. costs.—*Morning Advertiser.*

Patents.

APPLICATIONS PUBLISHED.*

27,677 of 1908.—Stainslaw Rechniewski: Means for connecting ferro-concrete members with iron members in framed structures or bridges or buildings.

28,091 of 1908.—Henry M. de Daillens: Ball-and-socket joint.

561 of 1909.—Thomas Richard Atherton: Emergency-exit fastenings for sliding doors.

838 of 1909.—Frederick Stead: Door and gate operating mechanism.

3,404 of 1909.—Henry Herbert Mattonet: Adjustable spanners or wrenches.

4,103 of 1909.—Charles William Hampton: Pipe cutters, pipe wrenches, and the like.

6,682 of 1909.—Mary Ewart Cambell: Combined baths and sinks and combined baths and lavatories.

7,071 of 1909.—James Thomson: Stoves or fireplaces.

8,055 of 1909.—Ellsworth Grant Welch: Roofing sheets, wall coverings, or the like.

8,530 of 1909.—Thomas Sanders, Henry Sanders, George Sanders, trading as Thomas Sanders and John Bache le Maitre: Fanlight and like openers or fittings.

9,567 of 1909.—Julius Müller: Locking device for blinds.

11,372 of 1909.—Jan Bronislaw Hahn and Rudolf Kmunke: Wall and floor linings.

11,749 of 1909.—Adolf Hlawatsch: Pointing tools for masonry.

11,753 of 1909.—Francis Joseph James Gibbons: Door-knobs or handles, and the attachment thereof to their spindles.

15,517 of 1909.—Harry Percival Harvey Anderson: Opening and closing of doors by hydraulic means.

15,627 of 1909.—Drägerwerk Heinr. and Bernh. Drager: Burners for welding purposes.

* All these applications are in the stage in which opposition to the grant of a patent upon them can be made.

PATENTS.—*Continued on page* 100.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. Those with an asterisk (*) are advertised in this Number: Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xv.; Auction Sales, xxii.

Certain conditions, beyond those given in the following information, are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bonâ-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

***** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.**

Competitions.

JANUARY 1-MARCH 1. — **Leeds.** — PREMISES. — The Directors of the Leeds Industrial Co-operative Society, Ltd., invite architects to submit competitive drawings and estimates for new business premises and offices, to be erected on the site of the old "Mercury" office, Albion-street, Leeds. Premiums of 100*l*., 50*l*., and 25*l*. respectively are offered, and will be awarded to the authors of the designs and plans placed first, second, and third by the assessor appointed by the directors. Conditions of competition, etc., will be forwarded on application to the Secretary, on receipt of stamped addressed foolscap envelope, accompanied with a deposit of 2*l*. 2s.

JANUARY 27. — **Southampton.** — PAVILION ON THE COMMON.—The Corporation invite designs from inhabitants of the Borough for the erection of a pavilion on the Common at a cost of not exceeding 500*l*. Particulars and conditions may be obtained upon application at the Town Clerk's Office. A premium of 10*l*. will be awarded to the architect whose design shall be chosen by the Public Lands and Market Committee of the Council, and a second premium of 5*l*. will be awarded.

JANUARY 31. — **Cardiff.** — NATIONAL MUSEUM.—The Council invite competitive designs for the erection of a new National Museum at Cardiff. Premiums of 200*l*., 150*l*., and 100*l*. for second, third, and fourth places. Particulars on receipt of a deposit of 2*l*. 2s. from Dr. Wm. Evans Hoyle, Director of the Museums, City Hall, Cardiff. For further particulars see advertisement in our issue of August 28.

FEBRUARY 1. — **Oldham.** — PROPOSED EXTENSION OF THE TOWN HALL.—The T.C. invite competitive designs for a proposed extension of the existing Town Hall from architects practising or residing within the Borough. A plan of the site, together with instructions and suggestions for the guidance of architects, may be obtained on application to Mr. E. C. Foote, the Borough Surveyor, on payment of 1*l*. 1s. Premiums of 50*l*., 30*l*., and 20*l*. respectively will be awarded to the authors of the designs which are selected as first, second, and third in order of merit, and a sum of 5*l*. will be paid to all unsuccessful competitors who send in a complete set of plans in accordance with the instructions.

FEBRUARY 1. — **St. Austell.** — CHURCH.—Competitive plans are invited for the erection of a proposed new Wesleyan church at Stenalees to seat 500 persons, and to include minister's vestry, lavatory, heating, lighting, and provision for a future gallery to seat 100, at a cost not exceeding 1,750*l*. Three premiums, namely, 5*l*., 3*l*., and 2*l*., are offered for the three sets of plans which the trustees may select, the premium of the finally selected architect to merge into his commission. Full particulars and inspection of the site may be obtained on application to Mr. J. D. Vosper, Stenalees.

* FEBRUARY 8.—**London.**—POSTER.—The Committee of the A.A. Play, 1910, invite designs for a poster illustrating this year's play. See advertisement in this issue for further particulars.

* MARCH 1.—GLAZED BRICKWORK.—A committee of glazed brick manufacturers invite designs for works to be executed in glazed brickwork, and also essays on same.

Three prizes—100 guineas, 50 guineas, and 25 guineas respectively—are offered. See advertisement in this issue for further particulars.

MARCH 12. — **Blyth.** — SECONDARY SCHOOL. — The Governors of the Blyth Secondary School (acting for the Blyth U.D.C.) invite architects whose offices are situate in the counties of Northumberland, Durham, and Newcastle-upon-Tyne to submit plans in competition for a new secondary school and caretaker's house, to be erected at Blyth. The school is to accommodate 280 pupils. The competition will be conducted in accordance with the regulations of the Royal Institute of British Architects. The assessor appointed is Mr. J. A. Gotch, F.R.I.B.A., F.S.A. Copies of the conditions and of the plan of site may be obtained from Mr. Thos. R. Guthrie, Clerk to the Governors.

MAY 31. — **Karachi.** — MUNICIPAL OFFICE. — The Municipality of Karachi invite elevation designs and detailed plans and estimates for a new Municipal Office. For further particulars see advertisement in our issue of December 25.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JANUARY 24. — **Ballieborough.** — COTTAGES.—The R.D.C. invite tenders for the erection of single cottages throughout the district, in accordance with the plan and specification prepared by Mr. Patrick O'Reilly, C.E., Bruise-hill, Virginia. Tender forms, etc., can be had on application to Mr. Hugh Clarke, Clerk of District Council, Poor Law Office, Ballieborough.

JANUARY 24.—**Bridlington.**—ADDITIONS TO HOUSE.—Alterations and additions to West End House, Bridlington, for Mr. C. E. Field, J.P. Plans, etc., at West End House. Messrs. Brodrick, Lowther, & Walker, architects, 77, Lowgate, Hull.

JANUARY 24. — **Edinburgh.** — ALTERATIONS.—Edinburgh School Board invite estimates for the carrying out of works in connexion with alterations to be carried out at No. 15, Duncan-street. Plans may be seen, and schedules obtained, at the office of Mr. Carfrae, architect, 3, Queen-street.

JANUARY 24.—**Fletton, Peterborough.**—HOUSES.—For labour in erection of a pair of houses in Queen's-walk, Fletton. Specifications, etc., may be seen at the offices of the Co-operative Society, Park-road, Peterborough.

JANUARY 24. — **Lincoln.**—SCHOOL.—Lincoln Education Committee invite tenders for the erection of a public elementary school on Spring-hill, Lincoln. Apply to the architect, Mr. W. G. Watkins, Bank-street, Lincoln. Applications are to be accompanied by a deposit of 1*l*.

JANUARY 24. — **Newport.**—METER-HOUSE.—The Corporation invite tenders for the erection of a filter and meter-house at Ynis-y-Fro Reservoir, in accordance with plans, etc., to be seen at the office of the Water Engineer, Mr. R. H. Haynes, Town Hall, where bill of quantities may also be obtained upon production of the receipt of the Borough Treasurer for 1*l*. 1s.

JANUARY 24. — **Rathdrum (Ireland).**—COTTAGES, ETC.—For building twenty-three single labourers' cottages and for fencing twenty-seven plots, for the R.D.C. Forms of tender, etc., on payment of 5s.

JANUARY 24-FEBRUARY 12.—**Sharpness.**—SCHOOL.—Gloucestershire Education Committee invite tenders for the erection of a new school at Newtown, Sharpness. Bills of quantities can be obtained from Mr. R. S. Phillips, architect, Midland Bank-chambers, Gloucester, upon depositing 2*l*. 2s.

JANUARY 24.—**Terrington St. Clement.**—ALTERATIONS, ETC.—Alterations and additions to house at Terrington St. Clement, for Mr. Thos. Croot. Bill of quantities may be obtained at offices of Messrs. Walker & Walker, architects and surveyors, Wisbech (also at Terrington and King's Lynn), upon deposit of 1*l*. 1s.

JANUARY 25. — **Golcar.**—DWELLING-HOUSES.—Trades (except carpenters and joiners') required in the erection of dwelling-houses at Leymoor, Golcar. Plans may be seen, and quantities obtained, at office of Mr. Arthur Shaw, architect, Golcar.

JANUARY 25.—**Sunderland.**—EXTENSIONS, ETC., TO PREMISES.—Extensions and additions to premises No. 36, Fawcett-street, for Messrs. H. Binns, Son, & Co., Ltd. Plans may be seen, and quantities obtained, on application at the offices of the architects, Messrs. W. & T. R. Milburn, F.R.I.B.A., 20, Fawcett-street.

JANUARY 25. — **Williamstown.** — CHAPEL.—English Presbyterian Chapel at Williamstown, Penygraig. Plans, etc., may be seen at offices of Messrs. Arthur Ll. Thomas & Gomer S. Morgan, architects, Church-street-chambers, Pontypridd.

JANUARY 26. — **Manchester.**—BATHS, ETC.—Wash-baths and wash-houses at Miles Platting. Drawings may be seen, and specifications, etc., obtained, at the office of the City Architect, Town Hall, upon payment of 2*l*. 2s. All cheques or postal orders are to be made payable to the order of "The Corporation of Manchester."

JANUARY 26.—**Milnthorpe.**—POLICE-STATION.—Erection of a police-station at Milnthorpe, for the Standing Joint Committee of the Westmorland C.C. Plans, etc., at the office of Mr. J. Bintley, County Surveyor and Architect, 7, Lowther-street, Kendal.

JANUARY 26. — **Thomastown.** — SCHOOLS. — New schools at Thomastown, Co. Kilkenny, for the Sisters of Mercy. The plans, etc., can be seen at the Convent of Mercy, Thomastown, or at office of Messrs. William H. Byrne & Son, architects, 20, Suffolk-street, Dublin.

JANUARY 27. — **Bare Island.** — ADDITIONS. — The Board of Public Works invite tenders for additions and alterations to the War Signal Station, Bere Island, Co. Cork. The plan, etc., can be seen at Castletown Royal Irish Constabulary Barracks, where printed forms of tender can be had.

JANUARY 27. — **Belfast.** — SHOP, ETC. — Erection of shop and dwelling-houses at Upper Newtownards-road, Belfast, for Messrs. the Belfast Co-operative Society, Ltd. Drawings, etc., may be seen, and copy of quantities can be obtained, at the office of Messrs. M'Carthy & Brookes, quantity surveyors, Scottish Provident-buildings, on payment of 1*l*. 1s.

JANUARY 27.—**Dewsbury.**—OFFICES.—The Education Authority invite tenders for the works required in the erection of out offices for the girls' department of the Carlton-street Council School. Plans, etc., may be seen, and bills of quantities obtained, at the Borough Surveyor's office, Town Hall.

JANUARY 27. — **Oswestry.** — ADDITIONS, ETC.—For additions, etc., to buildings for conveniences, shelters, etc., at Cae Glas Park, for the Town Council. Plans, etc., prepared by the Borough Engineer and Surveyor, which may be seen, and bill of quantities, etc., obtained, on deposit of 10s. 6d., on application to Mr. G. William Lacey, C.E., Borough Engineer and Surveyor, Guildhall, Oswestry.

JANUARY 27. — **Oswestry.** — ADDITIONS, ETC., TO HOUSE.—For additions, etc., to house, Cae Glas, and all other work, for the Town Council, in accordance with plans, etc., prepared by the Borough Engineer and Surveyor, which may be seen, and bill of quantities, etc., obtained, on deposit of 10s. 6d., on application to Mr. G. William Lacey, C.E., Borough Engineer and Surveyor, Guildhall, Oswestry.

JANUARY 28.—**Holywell Green.**—OFFICES, ETC.—Erection of new offices and cart-sheds at Springwood Mills, Holywell Green, for Messrs. R. & J. Holroyd. Plans may be seen, and quantities obtained, at offices of Mr. Fred F. Beaumont, architect, Southgate-chambers, Halifax.

JANUARY 28.—**Merthyr.**—ALTERATIONS.—Tenders are invited for alterations to the Express Inn, High-street, Merthyr. Plans, etc., at Mr. C. M. Davies's office.

JANUARY 28.—**Pittenweem (Scotland).**—HOSPITAL EXTENSIONS. — For extension of the Ovenstone Hospital, Pittenweem. Plans may be seen with Mr. Henry, architect, St. Andrews.

JANUARY 28.—**Yeoford.**—ADDITIONS, ETC., TO FARM.—Alterations, additions, and repairs to the house and buildings at Warren's Farm, Yeoford, in the parish of Crediton, close to Yeoford Junction Station, for Mr. James Lee. Plans, etc., may be seen at Mr. Ware's, Railway Hotel, Yeoford, or at Mr. James Lee's, Highbury Villa, Windsor-road, Torquay.

JANUARY 29. — **Dawdon.** — STORE PREMISES.—The Committee of the Ryhope and Silksworth Industrial and Provident Society invite tenders for the building of new store premises, warehouses, shops, stabling, etc., at Dawdon. Plans may be seen, and bills of quantities obtained, on payment of 1*l*. 1s., at the offices of the architects, Messrs. W. & T. R. Milburn, FF.R.I B.A., 20, Fawcett-street, Sunderland.

JANUARY 29.—**Nelson (Lancs).**—ALTERATION.—For work required in connexion with the alteration of the Technical School premises in Market-street, for the Education Committee. Plans, etc., may be seen, and forms of tender obtained, on application at the office of Mr. B. Ball, A.M.Inst.C.E., Borough Engineer and Surveyor.

JANUARY 29. — **Plymouth.** — STORE.—Erection of a store at the Victoria Wharves, Cattedown, Plymouth. Plans, etc., can be seen at the office on the wharves. Any further information can be obtained from Mr. W. F. Tollit, architect, Totnes.

JANUARY 31.—**Cartmel.**—ALTERATIONS, ETC.—Alterations and additions to the King's Arms Hotel, Cartmel, for Mr. E. Sattenstall. Bills of quantities may be obtained from, and drawings inspected at, the office of Messrs. J. W. Grundy & Son, architects and surveyors, Central-buildings, Ulverston.

JANUARY 31.—**Nottingham.**—URINAL.—The Tramways Committee invite tenders for the erection of a public urinal on Colwick-road. Drawings may be seen, and copy of the specification, etc., may be obtained, on applying to Mr. Arthur Brown, M.Inst.C.E., City Engineer, on payment of a deposit of 1*l*. 1s.

JANUARY 31. — **Sheffield.** — EXTENSION OF HALL OF RESIDENCE.—The Education Committee invite tenders for the work to be done in the extension of women's hall of residence, Ecclesall-road and Collegiate-crescent; also for heating apparatus and electric installation. Plans, etc., may be seen, and copies of the bills of quantities obtained, on application at the offices of the architects, Messrs. Gibbs, Flockton, & Teather, 15, St. James'-row, Sheffield.

* FEBRUARY 1. — **Bromley.**—LODGE.—The Bromley T.C. invite tenders for a lodge on the Whitehall Recreation Ground, Bromley. See advertisement in this issue for further particulars.

FEBRUARY 1. — **Cavan.** — COTTAGES.—Cavan R.D.C. invite tenders for the erection of cottages at a sum of 125*l*. each, including fencing. Mr. Joseph D. Grier, Clerk of Council, Council Office, Cavan.

FEBRUARY 1. — **Glasgow.** — ALTERATIONS, ETC., TO TRAMWAY DEPÔT.—The Corporation invite tenders for works required in connexion with the proposed alterations and additions to tramway depôt at Maryhill. Plans can be seen, and specifications, etc., obtained, on application to Mr. Jas. Dalrymple, General Manager, 46, Bath-street. Bank draft for 2*l*. 2s., payable to Mr. Dalrymple, must be sent along with application for schedules.

* FEBRUARY 1.—**London, N.W.**—FIREPROOF SCREENS.—The Guardians of Paddington invite tenders for fireproof screens at Children's Home, Tremmar-

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

gardens, College Park, N.W. See advertisement in this issue for further particulars.

FEBRUARY 1.—**Margate.**—WALLS, ETC.—Tenders are invited (*a*) for the erection of walls, construction of water-closet, wash-house, coal-shed, etc.; (*b*) for the erection of bath and ante-room, etc. Plans, etc., can be seen, and all further particulars obtained, on application to Mr. E. A. Borg, Borough Surveyor, 18, Grosvenor-place, Margate.

✱ FEBRUARY 3. — **East Molesey.** — ISOLATION HOSPITAL.—The East and West Molesey U.D.C. invite tenders for an isolation hospital. See advertisement in this issue for further particulars.

FEBRUARY 4.—**Bradfield.**—SCHOOL WORKS.—The West Riding Education Committee invite tenders for Bradfield, Oughtibridge Provided School alterations. Plans may be seen, and specifications, etc., obtained, on application to the Education Architect, County Hall, Wakefield. A deposit of 1*l.* must be sent by separate letter to the West Riding Treasurer, County Hall, Wakefield.

✱ FEBRUARY 4.—**Ellesmere (Salop).**—COTTAGES, ETC.—The Salop C.C. (Small Holdings Committee) invite tenders for six cottages and six sets of farm buildings for small holdings at the Trench, near Ellesmere Station. See advertisement in this issue for further particulars.

FEBRUARY 4.—**Marsden.**—TOWER.—Erection of a tower to St. Bartholomew's Church, Marsden, near Huddersfield. Drawings, etc., at Messrs. John Kirk & Sons' offices, John William-street, Huddersfield.

FEBRUARY 4.—**Thornton-in-Craven.**—SCHOOL.—The West Riding Education Committee invite tenders for Thornton-in-Craven, Earby New School. Plans may be seen, and specifications, etc., obtained, on application to the Education Architect, County Hall, Wakefield. A sum of 1*l.* must be sent by separate letter to the West Riding Treasurer, County Hall, Wakefield.

✱ FEBRUARY 7. — **Devonport.** — NURSING STAFF QUARTERS.—The Secretary of State for War invites tenders for nursing staff quarters and reconstruction of military families' hospital at Raglan Barracks, Devonport. See advertisement in this issue for further particulars.

FEBRUARY 7.—**Donabate and Keady.**—STATION, ETC.—The Directors of Great Northern Railway Company, Ireland, invite tenders for a station building at Donabate; also for a goods store at Annvale Siding, near Keady Station. Plans, etc., at the office of Mr. F. A. Campion, Chief Engineer, Amiens-street Terminus, Dublin, or copies of them at the office of the District Engineer, Belfast, and forms of tender on payment of 1s. each (not returnable).

✱ FEBRUARY 7.—**Dublin.**—MORTUARY.—The Secretary of State for War invites tenders for a mortuary and disinfecting establishment, Arbor Hill Hospital, Dublin. See advertisement in this issue for further particulars.

FEBRUARY 7.—**Margate.**—ALTERATIONS TO COTTAGES.—Tenders are invited for alterations to the cottages at the Wingham Pumping Station, and also the redecoration of the interiors, in accordance with the plan, etc., prepared by the Borough Surveyor. Plan, etc., can be seen, and all further particulars obtained, on application to Mr. E. A. Borg, Borough Surveyor, 13, Grosvenor-place, Margate.

FEBRUARY 8.—**Elkesley.**—PUMPING STATION BUILDINGS.—The Lincoln Corporation invite tenders for the construction of engine-house, boiler-house, economiser house, cold store, workshop, and stores; and also of chimney, engineer's house, cottages, and subsidiary works, at Elkesley, Notts. Drawings may be seen, and specification, etc., obtained, at the office of the engineer, Mr. Neil McK. Barron, Waterworks Engineer, Lincoln, upon production of a receipt from the City Accountant for the sum of 5*l.* 5s.

FEBRUARY 9.—**Llanfair.**—SCHOOL.—New Council School at Llanfair P.G., for the Anglesey Education Committee. Plans, etc., may be inspected at office of Mr. Jos. Owen, F.R.I.B.A., County Architect, Menai Bridge.

✱ FEBRUARY 9. — **Redford.** — FOUNDATIONS.—The Secretary of State for War invites tenders for foundation work for barrack block, excavating and levelling site for new cavalry barracks, Redford. See advertisement in this issue for further particulars.

✱ FEBRUARY 10.—**Ilford.**—HOSPITAL.—The Governors of the Ilford Emergency Hospital invite tenders for hospital at Norbury Park, Ilford. See advertisement in this issue for further particulars.

✱ FEBRUARY 10. — **Torquay.** — POST-OFFICE.—The Commissioners of H.M. Works and Public Buildings invite tenders for a new Post-office at Torquay. See advertisement in this issue for further particulars.

✱ FEBRUARY 16.—**Homerton, N.E.**—PAVILION.—The Guardians of the Hackney Union invite tenders for a pavilion at their Infirmary, Homerton, N.E. See advertisement in this issue for further particulars.

FEBRUARY 16.—**Newport.**—ROOFING.—The Corporation of Newport invite tenders for recovering with zinc or copper part of the roof of their general markets. A sectional drawing of the roof, together with general specification, may be obtained from Mr. R. H. Haynes, Borough Engineer, on production of a receipt from the Borough Treasurer for 1*l.* 1s.

✱ FEBRUARY 19. — **Paulton, near Bristol.** — CHURCH-HOUSE.—The Building Committee invite tenders for a church-house, Paulton, near Bristol. See advertisement in this issue for further particulars.

NO DATE. — **Airdrie.** — ALTERATIONS, ETC., TO CHURCH.—Proposed alterations and extensions to South Bridge-street U.F. Church, Airdrie. Messrs. Geo. Arthur & Son, architects, Airdrie, Scotland.

NO DATE.—**Glazebury.**—ADDITIONS.—Proposed additions to "Ward's End" Farm, Glazebury, Radcliffe Estates Company, Ltd. Send names to Messrs. J. B. & W. Thornley, architects, Wigan.

NO DATE.—**Larne.**—REBUILDING MANSE.—The Committee of First Larne Presbyterian Church invite tenders for rebuilding manse. Drawings, etc., may be seen, and further particulars obtained, at office of Messrs. Watt, Tulloch, & Fitzsimons, architects, 77A, Victoria-street, Belfast.

NO DATE.—**Stanton Gate.**—ALTERATIONS.—Alterations to present club premises and the erection of the additional buildings at Stanton Gate, for the Erewash Valley Golf Club. Quantities from Mr. E. R. Ridgway, architect, Long Eaton, on deposit of 1*l.* 1s.

ENGINEERNG, IRON, AND STEEL.

JANUARY 24.—**Manchester.**—CRANE.—Manchester Corporation Waterworks Committee invite tenders for the supply of a fixed hand-power wharf crane to be erected on their Thirlmere Estate. Specification, etc., may be obtained on application to the Secretary, Waterworks Offices, Town Hall, Manchester.

JANUARY 25.—**London.**—DECK SPANS.—The Rohilkund and Kumaon Railway Company, Ltd., Directors invite tenders for the supply and delivery of twenty-two 40-ft., thirty 20-ft., twenty-five 12-ft., and thirty-one 6-ft. deck spans, as per specification to be seen at 237, Gresham House, Old Broad-street, London, E.C. For each specification a fee of 10s. will be charged, which cannot under any circumstances be returned.

JANUARY 25.—**Manchester.**—BELLOWS.—Manchester Corporation Town Hall Committee invite tenders for the making and fixing complete of new main bellows with all framing and additional trunking, for the Town Hall organ. Drawings may be seen, and form of tender, etc., obtained, at the office of the City Architect, from whom any further information may be obtained.

JANUARY 27.—**London.**—PLANT.—The Secretary of State for India in Council is prepared to receive tenders for supply of electric power plant. The conditions of contract may be obtained on application to the Director-General of Stores, India Office, Whitehall, S.W.

JANUARY 28. — **Tonypandy.**—BRIDGE.—Rhondda U.D.C. invite tenders for the construction of a bridge, 20 ft. high and 16-ft. span, on existing foundations over the colliery incline at Nant Gwyn, Tonypandy. Forms, etc., at Surveyor's Office, Council Offices, Pentre, Rhondda. Deposit of 1*l.* 1s.

JANUARY 29.—**Newcastle-upon-Tyne.**—ELECTRIC CRANE.—The Corporation of Newcastle-upon-Tyne invite tenders for the supply and erection of an electric crane at the quayside. Specification and diagrams can be obtained on application at the City Engineer's Office, Town Hall.

JANUARY 31.—**Bristol.**—ELECTRIC LIGHTING.—The Docks Committee of the Council of the City and County of Bristol invite tenders for the electric lighting of the passenger station at the Royal Edward Dock, Avonmouth. Copies of specification, etc., can be obtained from Mr. W. W. Squire, Engineer, Engineer's Office, Cumberland-road, Bristol, on production of a receipt showing that a deposit of 3*l.* has been paid to the Secretary of the Docks Committee, 19, Queen-square, Bristol, to whom all cheques must be made payable.

FEBRUARY 1.—**London.**—BRIDGEWORK.—The Secretary of State for India in Council invites tenders for supply of bridgework. The conditions of contract may be obtained on application to the Director-General of Stores, India Office, Whitehall, S.W.

FEBRUARY 1.—**London.**—STEEL BRIDGE GIRDERS.—The Directors of Great Western Railway Company invite tenders for the supply of about 430 tons of steel bridge girders and other iron and steel work. Plans, etc., may be seen, and forms of tender and bills of quantities obtained, at the office of the Engineer at Paddington Station, London.

FEBRUARY 1. — **London.** — STEEL SLEEPERS. — The Directors of H.H. the Nizam's Guaranteed State Railways Company, Ltd., invite tenders for the supply of 50,000 transverse steel sleepers and 110,000 steel keys for same, as per specification, to be obtained at the Company's offices, 268, Winchester House, 50, Old Broad-street, London, E.C., for the sum of 5s., which amount will not be returned.

✱ FEBRUARY 2.—**Bridgend.**—BOILER AND HEATING APPARATUS. — The Committee of Visitors of the Glamorgan County Asylum invite tenders for (*a*) one new Lancashire boiler; (*b*) central heating apparatus, at their Pare Gwyllt Asylum, near Bridgend, Glamorgan. See advertisement in this issue for further particulars.

FEBRUARY 3.—**Oldham.**—TRAMWAYS.—The Surveyors and Tramways Committee invite tenders for the materials and labour required in the construction of new tramways in George-street and Market-place. Plans, etc., may be seen, and quantities and form of tender obtained, at the Borough Surveyor's Office, upon payment of a deposit of 1*l.* 1s.

FEBRUARY 5.—**Newcastle-upon-Tyne.**—RENEWAL OF TRAMWAY JUNCTION.—The Tramways Committee invite tenders for the renewal of the tramway junction at Neville-street and Grainger-street. Copies of the specification may be obtained on application to the City Engineer, Town Hall, Newcastle, on depositing 1*l.* 1s. with the City Treasurer.

FEBRUARY 14.—**Auckland.**—BRIDGE.—The R.D.C. of Auckland invite tenders for building a small bridge at Horndale, on the road between Middridge and Aycliffe, and making the road, approaches, etc. Plans, etc., may be seen, and form of tender obtained, at the office of Mr. John Heslop, Highway Surveyor, Cockton House, Bishop Auckland.

NO DATE.—**Cleckheaton.**—RAILWAY SIDING.—Construction of a railway siding at Flat-lane Chemical Works, Cleckheaton, for Messrs. Henry Ellison, Ltd. Names to Messrs. Howorth & Howorth, architects, Old Bank-chambers, Cleckheaton.

NO DATE.—**Creigiau.**—DRIVING A DRIFT.—Driving a cross-measures drift and for extending a pair of drifts. Further information from Mr. Rees Roderick, Manager, South Cambria Colliery, Creigiau, near Cardiff.

NO DATE.—**London.**—PUMP.—Hamlet of Mile End Old Town Guardians invite tenders for supplying and fixing one Worthington underwriter steam fire pump on their Workhouse premises in Bancroft-road, Mile End, London, E. Specifications may be obtained upon application to Mr. Benjamin Catmur, Clerk to the Guardians, Guardians' Offices, Bancroft-road, Mile End, E. Any further information that may be required may be had from the Chief Engineer on the premises.

MISCELLANEOUS.

JANUARY 24. — **Bridgwater.** — TEAM LABOUR.—Bridgwater R.D.C. invite tenders for team labour (day and contract work) and steam rolling for the various main and district roads. Printed forms of tender will be supplied on application to Mr. T. M. Reed, Solicitor, Bridgwater, and Clerk to the Council, R.D.C. Offices.

JANUARY 24. — **London.** — CARTAGE.—The Metropolitan Water Board invite tenders for the execution of cartage work for twelve months. Official forms may be obtained from the Clerk, Savoy-court, Strand, W.C., by personal application or on receipt of a stamped addressed envelope.

JANUARY 24.—**Morecambe.**—GARDEN SEATS.—The Roads Committee invite tenders for the supply of garden seats and shrub boxes for the Morecambe promenades and bays. Forms of tender, etc., may be obtained on application to Mr. J. W. Hipwood, A.M.Inst.C.E., Borough Surveyor, Morecambe.

JANUARY 24.—**Tankerton.**—PIER REMOVAL.—The U.D.C. invite tenders for the purchase and removal of the pier at Tankerton. Particulars, etc., may be had on application to the Council's Surveyor, Mr. Alfred Goldfinch.

JANUARY 26.—**Hull.**—PIPES.—The Corporation invite tenders for the supply and fixing of certain cast-iron, wrought-iron, and copper pipes and fittings, and for alterations to existing pipes, and other work. Forms of tender and other particulars may be obtained at the City Engineer's office. Blue prints of a drawing showing the pipes, etc., will be supplied upon payment of 2s. each, not returnable. Remittances to be made payable to Mr. T. G. Milner, City Treasurer.

JANUARY 27.—**Aylesbury.**—CARTING.—Bucks C.C. Highways Committee invite tenders for general carting and for haulage of granite. Forms of tender, etc., can be obtained from Mr. R. J. Thomas, County Surveyor, County Hall, Aylesbury.

JANUARY 28.—**Birmingham.**—CARTAGE.—Warwickshire C.C. invite tenders for the cartage of main road material, and for general team labour. Forms to be obtained from the County Surveyor, 6, Waterloo-street, Birmingham.

JANUARY 28.—**Rhondda.**—HAULAGE.—The U.D.C. invite tenders for haulage. Forms of tender may be obtained at the Surveyor's Office, Council Offices, Pentre, Rhondda.

JANUARY 28.—**Worcester.**—FURNITURE.—Worcestershire C.C. Education Committee invite tenders for the supply of furniture for elementary schools. Particulars may be obtained from the Director of Education, 37, Foregate-street, Worcester.

JANUARY 29.—**Crossgates.**—SCAVENGING.—Fife C.C. (Dunfermline District Committee, Crossgates Special Scavenging District) invite offers for the work of scavenging the above-named special district. Memorandum as to terms of contract and particulars to be obtained from Mr. William Davison, Sanitary Inspector, County-buildings, Dunfermline.

JANUARY 29.—**Southwick.**—CARTING.—Southwick U.D.C. invite tenders from ratepayers in the Urban District for horse hire for street watering, and also for general carting. Full particulars, etc., may be obtained on application to the Surveyor to the Council, Mr. Geo. W. Warr, at the Town Hall, Southwick.

JANUARY 31.—**Sandgate.**—SCAVENGING.—Sandgate U.D.C. invite tenders for the collection and disposal of the house refuse. Particulars and forms of tender can be obtained at the Surveyor's Office, Sandgate.

JANUARY 31.—**Sandgate.**—STEAM ROLLING.—Sandgate U.D.C. invite tenders for steam rolling and scarifying within the district. Particulars, etc., can be obtained on application at the Surveyor's Office, Sandgate.

FEBRUARY 3.—**Wallington.**—COLLECTION OF REFUSE.—The Wallington Parochial Committee invite tenders for the weekly collection and removal of garden refuse, and for the supply of horses and carmen for street watering. Forms of tender, etc., may be obtained at the offices of the R.D.C., Katharine-street, Croydon.

FEBRUARY 7.—**Southampton.**—ZINC PLATES.—The Director-General, Ordnance Survey, invites tenders for the supply of thin zinc printing plates. Applications for forms of tender, etc., should be made to the Officer in Charge of Stores, Ordnance Survey Office, Southampton.

FEBRUARY 9.—**Bradford.**—CARTAGE.—The Bradford Corporation invite tenders for the cartage of limestone and other road metal; also for the team labour required in the cleansing and maintenance of the macadamised roads. Forms of tender, etc., may be obtained on application at the office of Mr. W. H. S. Dawson, City Engineer and Surveyor, at the Town Hall.

FEBRUARY 12.—**Worcester.**—HAULING.—Worcestershire C.C. invite tenders for hauling materials to any of the county main roads. Apply to Mr. J. H. Garrett, County Road Surveyor, Shirehall, Worcester.

FEBRUARY 28.—**Glasgow.**—BOOKCASES IN PRINCIPAL BOOK STORES.—The Corporation invite offers for supplying and erecting mahogany bookcases, Mitchell Library. Plans can be seen, and all information obtained, at the office of the architect, Mr. William B. Whitie, 219, St. Vincent-street, Glasgow. The Corporation also invite manufacturers of metal bookcases to submit designs and estimates for supplying and erecting said bookcases in metal. Plans and other necessary information will be obtained at the office of the architect. Specification and form of tender may be had at the Office of Public Works, 30, Cochrane-street, on payment of a deposit of 5*l.* 5s.

PAINTING, etc.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JANUARY 24.—**Abertridwr.**—PAINTING.—Painting ninety-five cottages at Abertridwr for the Windsor Building Club, Porth. Full particulars may be obtained on application to Mr. W. D. Thomas, architect, Tydfil House, Porth.

JANUARY 26.—**Bradford.**—PAINTING.—The Bradford Corporation invite tenders for internal painting, etc., required to be done at the City Hospital, Leeds-road. General conditions of contract may be seen, and specifications, etc., obtained, on application to Mr. Reginald G. Kirby, A.R.I.B.A., F.S.I., City Architect, Town Hall, Bradford.

ROADS, SANITARY, AND WATER WORKS.

JANUARY 24. — **Blackburn.** — ROAD WORKS.—The Highway Committee invite tenders for excavating, forming, and paving of Brooklands-terrace, St. Stephen's-road, and the back roads behind Longshaw-lane and Bolton-road. Plans, etc., may be seen, and all information obtained, upon application at office of Mr. William Stubbs, A.M.Inst.C.E., Borough Engineer, Municipal Offices, Blackburn.

JANUARY 24. — **Mansbridge.** — SMALL RETAINING BANK.—Construction of a concrete retaining bank on the Botley-road at West End Mill, near Mansbridge. Conditions of contract can be seen, and copy of plan, etc., obtained, on application at the office of Mr. W. J. Taylor, County Surveyor, The Castle, Winchester. A deposit of 1*l.* 1s. will be required for a copy of the plan and specification. Deposits must be made by cheque, payable to the Hants C.C., and crossed Bank of England.

JANUARY 25.—**Guiseley.**—SEWER.—The Guiseley U.D.C. invite tenders for the making of about 269 yds. of 12-in. stoneware pipe sewer in Parkroad. Plans, etc., may be seen, and bills of quantities, etc., may be obtained, on application to Mr. Joe Battye, Surveyor, Town Hall, Guiseley, on payment of 10s. 6d.

JANUARY 25.—**Mardy.**—SEWER.—Rhondda U.D.C. invite tenders for relaying about 750 yds. of 12-in. main sewer at Mardy. Plans, etc., may be seen, and forms of tender obtained, at the Council Offices, Pentre, on payment of a deposit of 1*l.* 1s.

JANUARY 25.—**Oystermouth.**—SEWER CONSTRUCTION.—The Oystermouth U.D.C. invite tenders for the construction of about 529 lin. yds. of stoneware sewer, etc. Drawings, etc., may be seen at the office of the Surveyor of the Council, Council Offices, Oystermouth, from whom schedule of quantities and form of tender can be obtained on payment of 1*l.* 1s.

JANUARY 25.—**Chislehurst.**—SEWERING.—For the sewering of Mead-road, Chislehurst West, for the U.D.C. Forms of tender, etc., can be obtained on application at the Surveyor's Office, Hampden House, Station-road, Sidcup, on payment of the sum of 1*l.*

JANUARY 26.—**Hull.**—IMPROVEMENT WORKS.—The Corporation invite tenders for certain works of draining, paving, etc., in the back road behind 1 to 21, Westbourne-avenue, and in Lockwood-terrace, Lockwood-street. Forms of tender, etc., may be obtained of the City Engineer.

JANUARY 26.—**Lamancha.**—DRAINS.—For cutting, laying, and filling drains at Whim Farm, Lamancha. Mr. George Smith, the tenant, will point out the work, and offers will be received by Messrs. Blackwood & Smith, writers, Peebles.

JANUARY 27.—**Blaina.**—PAVING, ETC.—Nantyglo and Blaina U.D.C. invite tenders for the paving, kerbing, and channelling of Victoria-crescent and Coronation-street, Blaina. Plans, etc., may be seen at the office of the Council's Surveyor, Mr. W. J. Davies, Blaina, and copies of the bills of quantities, etc., may be obtained from him on depositing the sum of 1*l.* 1s.

JANUARY 27. — **Hackney.** — ROAD-MAKING. — The Metropolitan B.C. of Hackney invite tenders for the kerbing, channelling, paving, making-up, etc., of Egerton-road. The general conditions of contract, etc., may be inspected, and copies of the bill of quantities, etc., obtained, on application to Mr. Norman Scorgie, M.Inst.C.E., Borough Engineer and Surveyor, and on payment of the sum of 1*l.* 1s.

JANUARY 28.—**Richmond (Surrey).**—SEWERS AND ROADS.—The Richmond (Surrey) T.C. invite tenders for the construction of new sewers and roads on the Red Lion-street Area. Drawings and conditions of contract may be seen, and particulars obtained, on application to Mr. J. H. Brierley, Borough Surveyor, Town Hall, Richmond, Surrey, where also a form of tender, etc., may be obtained on payment of a deposit of 1*l.* 1s.

JANUARY 28.—**Treorchy and Porth.**—PAVING, ETC., WORKS.—Rhondda U.D.C. invite tenders for the paving, kerbing, channelling, road-making, etc., of streets at Treorchy and Porth. Plans may be seen, and forms of tender obtained, at the Surveyor's Office, Council Offices, Pentre, Rhondda, upon depositing the sum of 1*l.* 1s. for each contract.

* JANUARY 31.—**Streatham.**—ROAD-MAKING.—The Wandsworth B.C. invite tenders for making-up and paving of part of Welham-road, Streatham. See advertisement in this issue for further particulars.

FEBRUARY 1.—**Ashtead.**—ROAD-WIDENING.—Epsom R.D.C. invite tenders for the widening of Otway's-lane, near Whitehouse Farm, Ashtead. A plan, etc., of the works and form of contract may be seen at the office of the Surveyor of Highways, Mr. T. E. Ware, Waterloo-road, Epsom, where forms of tender, etc., may be obtained.

FEBRUARY 3.—**Cuilfail.**—ROAD WORKS.—Argyll C.C. (Lorn District Committee) invite tenders for the works connected with proposed diversion of road between Cuilfail and Muolochy. Specification may be seen at the Road Surveyor's office, Oban.

FEBRUARY 5.—**Edenderry.**—CONCRETE FOOTPATHS.—The Edenderry (King's County) Town Commissioners invite tenders for laying down new concrete footpaths through the town. Same to be sent to Town Clerk on or before February 5.

FEBRUARY 5.—**Stretford.**—STREET WORKS.—Stretford U.D.C. invite tenders for paving with setts, granited rock asphalt, etc. The drawings, etc., may be seen, and forms of tender, etc., obtained, on application to Mr. Ernest Worrall, the Council's Surveyor, on payment by cheque of 2*l.* 2s.

FEBRUARY 7.—**Bellshill and Mossend.**—DRAINAGE.—The District Committee of the Middle Ward of the County of Lanark invite tenders for providing and laying about 1,810 yds. of pipe sewers, and constructing relative works, near Mossend. Plans may be seen, and copies of specification, etc., obtained, at the office of Mr. W. L. Douglass, C.E., District Engineer, District Offices, Hamilton, on payment of 1*l.* An assistant engineer will meet intending contractors at Mossend Station at 10.32 a.m. on January 18.

FEBRUARY 7.—**Honiton.**—ROAD REPAIRS.—Honiton R.D.C. invite tenders for the maintenance and repair of the main roads within the district for three years. Specifications, etc., can be obtained on application to Mr. E. W. Hellier, Clerk to the Council. Further particulars may be had of Mr. W. North, Surveyor, Alfington, near Ottery St. Mary.

FEBRUARY 8.—**Lewisham.**—KERBING, ARTIFICIAL STONE PAVING, METALLING, AND CHANNELLING WORKS.—The B.C. invite tenders for above works (in separate contracts), for Thornwood-road, Lee. The plan, etc., may be seen, and forms of tender obtained, at the Town Hall, Catford (Surveyor's Department). Copies of the specification may also be had on payment of the sum of 5s. in each case, which will not be returned.

* FEBRUARY 10.—**London, S.E.**—DRAINAGE.—The Guardians of the Southwark Union invite tenders for carrying out certain drainage and other works at Infirmary, East Dulwich-grove, S.E. See advertisement in this issue for further particulars.

FEBRUARY 10. — **Southwark.** — DRAINAGE.—Southwark Guardians invite tenders for carrying out certain drainage and other works at their Infirmary, East Dulwich-grove, S.E. The specification, etc., may be obtained at the offices of the architect, Mr. A. W. Tribe, 120, Clapham-road, S.W., on payment of 5*l.*

FEBRUARY 10.—**Stockdale.**—DIVERSION OF RIVER ELLEN.—Aspatria, Silloth, and District Joint Water Board invite tenders for the following works:—Excavating, concreting, and walling in connexion with diversion of River Ellen at Stockdale; drainage at Stockdale; drainage at Whitefield House. Copies of the specification, etc., at the office of the Engineer, Mr. Joseph Graham, civil engineer, Castle-street, Carlisle, upon payment of 1*l.* (cheque only).

MARCH 1.—**Nempnett and Winford.**—NEW ROAD.—The R.D.C. of Clutton invite tenders for the construction of a new road, about 800 yds. in length, in the parishes of Nempnett and Winford. Copy of the specification on application to the Council's Surveyor, Mr. T. Orchard, The Grange, Hallatrow, near Bristol, by depositing the sum of 1*l.* 1s.

STONES, MATERIAL, AND STORES.

* JANUARY 24.—**London.**—WORKS AND MATERIALS.—The Metropolitan Water Board invite tenders for supply of stores and execution of works, etc., for twelve months ending March 31, 1911. See advertisement in this issue for further particulars.

JANUARY 24.—**Newport.**—STORES.—The Electricity and Tramways Department require tenders for the supply of stores. Specification, etc., may be obtained on application to Mr. H. Collings Bishop, Borough Electrical Engineer and Tramways Manager, Electricity and Tramways Department, Town Hall, Newport, upon forwarding a deposit of 5s.

JANUARY 24. — **Pietermaritzburg, Natal.** — WATERWORKS PIPES. — The Corporation of Pietermaritzburg, Natal, invite tenders for the manufacture, supply, and delivery, "free on rail" at Pietermaritzburg, Natal, of 2,000 yds. of small size cast-iron pipes. Specifications may be obtained from Mr. W. H. Radford, C.E., Representative Engineer, Albion-chambers, King-street, Nottingham.

JANUARY 24.—**Romford.**—GUERNSEY GRANITE SPALLS.—2,000 tons of blue Guernsey granite spalls, to be delivered in lots of 500 tons as required, at the Workhouse, Romford. Mr. Chas. Bloomfield, Clerk, Clerk's Office, Workhouse, Romford.

JANUARY 27.—**Aylesbury.**—FLINTS.—Bucks C.C. Highways Committee invite tenders for the supply and delivery of clean hand-picked flints. Forms of tender, etc., can be obtained from Mr. R. J. Thomas, County Surveyor, County Hall, Aylesbury.

JANUARY 27.—**Dublin.**—OILS.—The Commissioners of Irish Lights invite tenders for the supply and delivery at certain ports round Ireland of 23,000 imperial gallons, more or less, of the finest quality heavy mineral oil. Forms of tender, etc., can be obtained on application to Mr. H. G. Cook, Secretary, Irish Lights Office, Dublin.

FEBRUARY 28. — **Little Hulton.** — ANNUAL CONTRACTS.—Little Hulton U.D.C. invite tenders for the supply of broken granite, grit setts, granite, etc. Forms of tender, etc., can be obtained from Mr. James H. H. Heyes, Clerk, Council Offices.

JANUARY 28.—**Oswestry.**—RAILS, ETC.—Cambrian Railways Company invite tenders for the supply of 1,000 tons of steel rails and 27 tons of steel fishplates. Form of tender, etc., may be obtained on application to Mr. S. Williamson, Secretary, Oswestry.

JANUARY 28.—**Pembroke.**—SUPPLIES.—The Pembroke U.D.C. invite tenders for about one year's supply of materials. Forms of tender can be obtained on application at office of Mr. J. C. Manly, Clerk to the Council, Town Hall, Ballebridge, Pembroke, Co. Dublin.

JANUARY 28.—**Rhondda.**—STORES.—The U.D.C. invite tenders for stores. Forms, etc., at Surveyor's Office, Council Offices, Pentre, Rhondda.

JANUARY 29.—**Llandaff.**—LIMESTONE, ETC.—Llandaff and Dinas Powis R.D.C. invite tenders for the supply of mountain limestone and team labour, tools, etc. Forms may be obtained on application to the Surveyor, Mr. James Holden, A.M.Inst.C.E., at his office, 20, Park-place, Cardiff.

JANUARY 29.—**Surbiton.**—MATERIALS.—The U.D.C. of Surbiton invite tenders for the supply of materials. Specifications, etc., may be obtained on application to Mr. Henry T. Mather, Surveyor to the Council, Council Offices, Surbiton.

JANUARY 31. — **Durban, Natal.** — STONEWARE SEWERAGE PIPES.—The Corporation of Durban, Natal, invite tenders for the supply and delivery, "free on board," of one mile each of 6-in., 9-in., 12-in., and 15-in. stoneware sewerage pipes. Specifications can be obtained from Mr. W. H. Radford, C.E., Albion-chambers, King-street, Nottingham, Consulting and Representative Engineer to the Corporation, on deposit of 1*l.* 1s.

JANUARY 31.—**Sandgate.**—MATERIALS.—The U.D.C. invite tenders for supply of highway materials. Forms to be obtained from the Surveyor.

* JANUARY 31.—**West Ham.**—SUPPLIES, ETC.—The West Ham B.C. invite tenders for supplies, etc. See advertisement in this issue for further particulars.

FEBRUARY 1. — **Workshop.** — SLAG. — Worksop U.D.C. invite tenders for supply of slag. Forms of tender may be obtained on sending stamped addressed envelope to Mr. Geo. H. Featherston, Clerk, Town Hall, Worksop.

FEBRUARY 2.—**Herne Bay.**—ANNUAL CONTRACTS.—Herne Bay U.D.C. invite tenders for materials, etc. Forms of tender, etc., may be had on application to Mr. F. W. J. Palmer, Surveyor to the Council, Town Hall, Herne Bay.

FEBRUARY 5.—**Blackburn.**—MATERIALS, ETC.—The Corporation invite tenders for the supply of materials, tools, labour, etc. Specifications, etc., may be had on application at offices of Mr. William Stubbs, A.M.Inst.C.E., Borough and Water Engineer, Municipal Offices, Blackburn.

FEBRUARY 5.—**Wallasey.**—MATERIALS.—The Wallasey U.D.C. invite tenders for the supply during the twelve months of materials. Further particulars, etc., may be obtained on application at the office of Mr. W. H. Travers, A.M.Inst.C.E., District Engineer and Surveyor, Public Offices, Egremont, Cheshire.

FEBRUARY 7.—**Bethnal Green.**—ANNUAL CONTRACTS.—The B.C. invite tenders for the execution of works and supply of materials for one, two, or three years. Copies of the specification, etc., may be obtained on application to the Borough Engineer and Surveyor, at the Town Hall, Bethnal Green, N.E.

FEBRUARY 7.—**Cheshunt.**—ANNUAL CONTRACTS.—The U.D.C. of Cheshunt invite tenders for the supply of materials, etc. Specifications, etc., may be obtained on application to Mr. J. E. Sharpe, Engineer and Surveyor, Manor House, Cheshunt.

* FEBRUARY 7.—**Hendon.**—MATERIALS, ETC.—The Hendon U.D.C. invite tenders for supply of materials, etc., for one year, from April 1 next. See advertisement in this issue for further particulars.

FEBRUARY 7.—**London.**—STORES.—The Directors of the Powell Duffryn Steam Coal Company, Ltd., invite tenders for the supply of stores, etc. (grease and oils, paints, and dry salteries). Forms of tender, etc., can be obtained on application to the Stores Manager, Aberaman Offices, near Aberdare.

FEBRUARY 7.—**Northwich.**—STORES.—The River Weaver Trustees invite tenders for the supply of materials for the maintenance of the river. Schedule of approximate quantities and specifications may be obtained, on payment of 1*l.*, at the Engineer's Office, Northwich.

FEBRUARY 7.—**Weston-super-Mare.**—STORES.—The U.D.C. of Weston-super-Mare invite tenders for the supply and delivery of goods for the year ending March 31, 1911. Forms of tender, etc., will be supplied upon application, and samples of the goods may be inspected at the Council Depôt, Oxford-street, Weston-super-Mare.

FEBRUARY 8.—**County of Antrim.**—MATERIALS, ETC.—Tenders are invited for supplying horse works, broken stones, screenings, etc., on the roads which are to be maintained by direct labour in the Rural Districts of Aghalee, Belfast, and Lisburn. Specifications may be seen at the County Surveyor's Office, County Court House, Belfast.

FEBRUARY 9.—**Bradford.**—MATERIALS.—The Bradford Corporation invite tenders for the supply and delivery of articles. Forms of tender, etc., may be obtained on application at the office of Mr. W. H. S. Dawson, City Engineer and Surveyor, at the Town Hall.

FEBRUARY 9.—**Bradford.**—ROAD METAL.—The Bradford Corporation invite tenders for the supply of about 20,000 tons of road metal. Form of tender may be obtained on application at the office of Mr. W. H. S. Dawson, City Engineer and Surveyor, at the Town Hall.

FEBRUARY 12. — **Hastings.** — STONE.—Hastings R.D.C. invite tenders for 500 yds. of best unbroken blue stone, delivered in the parishes of Ore and Guestling. Forms of tender may be obtained of Mr. A. R. Inskipp, Clerk, 11, Wellington-square, Hastings, or of the District Surveyor, Mr. D. Paine, Stonelynk Farm, Fairlight, Hastings.

FEBRUARY 12. — **Worcester.** — ROAD MATERIAL.—Worcestershire C.C. Highways and Bridges Committee invite tenders for the supply of road materials. Full particulars, etc., will be forwarded on application to Mr. J. H. Garrett, County Road Surveyor, Shirehall, Worcester.

FEBRUARY 15.—**Folkestone.**—ANNUAL CONTRACTS.—The Corporation invite tenders for the supply of goods for the period of one year. Particulars, etc., may be obtained on application to Mr. A. E. Nichols, A.M.Inst.C.E., Borough Engineer, Corporation Offices, Folkestone.

FEBRUARY 16. — **Gloucester.** — MATERIALS. — Gloucestershire C.C. invite tenders for the supply of stone for use on main roads. Forms of tender can be obtained from the County Surveyor, Mr. E. S. Sinnott, M.Inst.C.E., Shire Hall, Gloucester.

Public Appointment.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
*WOODWORK INSTRUCTOR	London C.C.	See advertisement in this issue	Jan. 29

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*DEALS, BATTENS, BOARDS, TIMBER, Etc.—Great Hall, Winchester House, E.C.	Churchill & Sim	Jan. 26
*FRHLD. LAND, BALLAST PIT, Etc., W. DRAYTON, Etc.—De Burgh Arms, W. Drayton	Buckland & Sons	Jan. 27
*NURSERY STOCK, SOUTH WOODFORD.—On the Premises	Protheroe & Morris	Feb. 1

PATENTS—*Continued from page 96.*

15,639 of 1909.—Fred James Rees: Flooring.

16,198 of 1909.—Franz Kyll: Rectifying columns.

17,633 of 1909.—Joseph Duffy: Flooring blocks and dowels for same.

20,574 of 1909.—Karl Kohler: Siphon-flushing apparatus.

21,211 of 1909.—George Randolph Barham and John Huson Williams: Reinforced leaded lights.

24,765 of 1909.—Thomas Bamforth and George Hague: Domestic fireplaces.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

January 11.—By ORGILL, MARKS, & BARLEY.

Whitechapel.—10, Well-st., f., p.	£250
Notting Hill.—45, St. Ann's-rd., f., p.	340
177 and 179, Portland-rd., u.t. 40 yrs., g.r. 15*l.*, p.	100

By GEO. HEAD & CO.

Holloway.—14 to 26 (even), Girdlestone-rd., u.t. 67¾ yrs., g.r. 40*l.*, w. and q.r. 281*l.* 12s.	815
1, 27, and 29, Salisbury-rd., u.t. 41 yrs., g.r. 21*l.*, w.r. 124*l.* 16s.	275
28, Raydon-st., u.t. 54½ yrs., g.r. 5*l.* 5s., w.r. 41*l.* 12s.	150
Walthamstow.—17, 18, and 19, Gamuel-rd., u.t. 59½ yrs., g.r. 12*l.* 18s., w.r. 66*l.* 6s.	130
18, 20, 22, 24, and 26, Herbert-rd., u.t. 58½ yrs., g.r. 16*l.* 16s., w.r. 93*l.* 12s.	330
Clapton.—60, 62, and 64, Pedro-st., u.t. 58½ yrs., g.r. 15*l.*, w.r. 87*l.* 2s.	325
Marylebone.—22, Baker-st., and 22, Blandford-mews, u.t. 3½ yrs., g.r. 80*l.*, gross rental 500*l.*	235

January 12.—By P. S. RIEBOLD.

Highgate.—10, Brunswick-rd., u.t. 76 yrs., g.r. 6*l.*, w.r. 45*l.* 10s.	120

January 13.—By HEAPS, SON, & REEVE.

Islington.—5, Napier-ter., 22, Albert-st., and 17, Bemerton-st., u.t. 21, 30, and 37 yrs., g.r. 17*l.*, w. and y.r. 133*l.* 12s.	425
Prebend-st., etc., l.g.r. 102*l.*, u.t. 17 yrs., g.r. 83*l.* 16s.	100

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.

	£	s.	d.
Best Stocks	1	8	0

Per 1000, Delivered at Railway Depôt.

	£	s.	d.
Picked Stocks for Facings	2	10	0
Flettons	1	6	0
Best Fareham Red	3	12	0
Best Red Pressed Ruabon Facing	5	0	0
Best Blue Pressed Staffordshire	3	15	0
Do. Bullnose	4	0	0
Best Stourbridge Fire Bricks	3	14	0
GLAZED BRICKS.			
Best White and Ivory Glazed Stretchers	10	17	6
Headers	10	7	6
Quoins, Bullnose, and Flats	14	7	6
D'ble Stretchers	16	7	6
Double Headers	13	7	6
One Side and two Ends	17	7	6
Two Sides and one End	18	7	6
Splays & Squints	15	17	6
Best Dipped Salt Glzd. Str'tch'rs	10	17	6
Headers	10	7	6
Quoins, Bullnose, and Flats	14	7	6
D'ble Stretchers	16	7	6
Double Headers	13	7	6
One Side and two Ends	17	7	6
Two Sides and one End	18	7	6
Splays & Squints	15	17	6

BRICKS, &c. (*continued*).

	£	s.	d.
Second Quality White and Dipped Salt Glaze', per 1000 less than best.	£1	7s.	
Thames and Pit Sand	6	6	per yard delivered.
Thames Ballast	5	0	,, ,,
Best Portland Cement	28	0	per ton, ,,
Best Ground Blue Lias Lime	19	0	,, ,,

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 11s. 6d. per yard, delivered:
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly. dpt.

STONE.

Per Ft. Cube.	s.	d.
BATH STONE—delivered on road waggons, Paddington Depôt	1	6½
Do. do. delivered on road waggons, Nine Elms Depôt	1	8½
PORTLAND STONE (20 ft. average)—		
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	1
White Basebed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	2½

Per Ft. Cube, Delivered at Railway Depôt.

	s.	d.		s.	d.
Ancaster in blocks	1	10	Red Corsehill in blocks	2	2
Beer in blocks	1	6	Closeburn Red Freestone	2	0
Greenshill in blocks	1	10	Red Manafield Freestone	2	4
Darley Dale in blocks	2	4			

YORK STONE—*Robin Hood Quality.*

	s.	d.
Scappled random blocks	2	10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2	3	
6 in. rubbed two sides ditto, ditto	2	6	
3 in. sawn two sides slabs (random sizes)	0	11½	
2 in. to 2½ in. sawn one side slabs (random sizes)	0	7½	
1½ in. to 2 in. ditto, ditto	0	6	

Per Ft. Cube, Delivered at Railway Depôt.

Scappled random blocks	3	0	

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2	8	
6 in. rubbed two sides ditto	3	0	
3 in. sawn two sides slabs (random sizes)	1	2	
2 in. self-faced random flags	0	5	

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£	s.	d.	In. In.	£	s.	d.
20×10 best blue Bangor	13	2	6	20×10 best Eur'ka unfading green	15	17	6
20×12 ditto	13	17	6	20×12 ditto	18	7	6
20×10 1st quality ditto	13	0	0	18×10 ditto	13	5	0
20×12 ditto	13	15	0	16×8 ditto	10	5	0
16×8 ditto	7	5	0	20×10 permanent green	11	12	6
22×10 best blue Portmadoc	12	12	6	18×10 ditto	9	12	6
16×8 ditto	6	12	6	16×8 ditto	6	12	6

TILES.

At Railway Depot.

	s.	d.		s.	d.
Best plain red roofing (per 1000)	42	0	Best "Rosemary" brand plain (per 100)	48	0
Hip and Valley (per doz.)	3	7	Best Ornamental (per 1000)	50	0
Best Broseley (per 1000)	50	0	Hip (per doz.)	4	0
Do. Ornamental (per 1000)	52	6	Valley (per doz.)	3	8
Hip and Valley (per doz)	4	0	Best "Hartshill" brand, plain sand-faced (per 100)	50	0
Best Ruabon red, brown, or brindled (Edw'ds) (per 1000)	57	6	Do. pressed (per 1000)	47	6
Do. Ornamental (per 1000)	60	0	Do. Ornamental (per 1000)	50	0
Hip (per doz.)	4	0	Hip (per doz.)	4	0
Valley (per doz.)	3	0	Valley (per doz.)	3	6
Best Red or Mottled Staffordshire do. (Peakes) (per 1000)	51	9	Staffords. (Hanley) Reds or Brindled (per 1000)	42	6
Do. Ornamental do. (per 1000)	54	6	Hand-made sand-faced (per 1000)	45	0
Hip (per doz.)	4	1	Hip (per doz.)	4	0
Valley (per doz.	3	8	Valley (per doz.)	3	6

WOOD.

BUILDING WOOD.	At per standard. £	s.	d.	£	s.	d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14	0	0	15	10	0
Deals: best 3 by 9	13	19	0	14	10	0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	11	10	0	12	10	0
Battens: best 2½ by 6 and 3 by 6	0	10	0	less than 7 in. and 8 in.		
Deals: seconds	1	0	0	less than best.		
Battens: seconds	0	10	0	"	"	
2 in. by 4 in. and 2 in. by 6 in.	9	10	0	10	10	0
2 in. by 4½ in. and 2 in. by 5 in.	0	0	0	10	0	0
Foreign Sawn Boards—						
1 in. and 1¼ in. by 7 in.	0	10	0	more than battens.		
¾ in.	1	0	0	"		
Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 5	0	0	5	10	0
Seconds	4	10	0	5	0	0
Small timber (8 in. to 10 in.)	3	17	6	4	0	0
Small timber (6 in. to 8 in.)	3	5	0	3	10	0
Swedish balks	2	12	6	3	0	0
Pitch-pine timber (30 ft. average)	4	10	0	5	5	0

JOINERS' WOOD.	At per standard. £	s.	d.	£	s.	d.
White Sea: first yellow deals, 3 in. by 11 in.	24	10	0	25	10	0
3 in. by 9 in.	22	10	0	23	10	0
Battens, 2½ in. and 3 in. by 7 in.	17	0	0	18	0	0
Second yellow deals, 3in. by 11 in.	19	0	0	20	0	0
" " 3 in. by 9 in.	18	0	0	19	10	0
Battens, 2½ in. and 3 in. by 7 in.	14	0	0	15	0	0
Third yellow deals, 3 in. by 11 in. and 9 in.	14	0	0	15	0	0
Battens, 2½ in. and 3 in. by 7 in.	1	10	0	12	10	0
Petersburg: first yellow deals, 3 in. by 11 in.	21	10	0	22	10	0
Do. 3 in. by 9 in.	18	10	0	19	10	0
Battens	14	0	0	15	0	0
Second yellow deals, 3 in. by 11 in.	16	10	0	17	10	0
Do. 3 in. by 9 in.	15	0	0	16	0	0
Battens	11	10	0	12	10	0
Third yellow deals, 3 in. by 11 in.	13	10	0	14	10	0
Do. 3 in. by 9 in.	13	0	0	14	0	0
Battens	10	10	0	11	0	0
White Sea and Petersburg—						
First white deals, 3 in. by 11 in.	15	0	0	16	0	0
" " 3 in. by 9 in.	14	0	0	14	10	0
Battens	11	10	0	12	10	0
Second white deals, 3 in. by 11 in.	14	0	0	15	0	0
" " 3 in. by 9 in.	13	0	0	14	0	0
Battens	10	10	0	11	0	0
Pitch-pine: deals	19	0	0	21	0	0
Under 2 in. thick extra	0	10	0	1	0	0
Yellow pine—First, regular sizes	44	0	0	upwards.		
Oddments	32	0	0	"		
Seconds, regular sizes	33	0	0	"		
Oddments	28	0	0	"		
Kauri Pine—Planks, per ft. cube	0	3	6	0	5	0
Danzig and Stettin Oak Logs—						
Large, per ft. cube	0	3	0	0	3	9
Small " "	0	2	6	0	2	6
Wainscot Oak Logs, per ft. cube	0	5	6	0	6	0
Dry Wainscot Oak, per ft. sup. as inch	0	0	8½	0	0	9½
¾ in. do. do	0	0	7	—		
Dry Mahogany—Honduras, Tabasco, per ft. super. as inch	0	0	10	0	1	1
Selected, Figury, per ft. super. as inch	0	1	6	0	2	6
Dry Walnut, American, per ft. super. as inch	0	0	10	0	1	0
Teak, per load	18	0	0	22	0	0
American Whitewood Planks, per ft. cube	0	4	0	0	5	0

Prepared Flooring, etc.—	Per square.					
1 in. by 7 in. yellow, planed and shot	0	13	6	0	17	0
1 in. by 7 in. yellow, planed and matched	0	14	0	0	18	0
1¼ in. by 7 in. yellow, planed and matched	0	16	0	1	0	0
1 in. by 7 in. white, planed and shot	0	12	0	0	14	6
1 in. by 7 in. white, planed and matched	0	12	6	0	15	0
1¼ in. by 7 in. white, planed and matched	0	15	0	0	16	6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0	11	0	0	13	6
1 in. by 7 in. " "	0	14	0	0	18	0
¾ in. by 7 in. white " "	0	10	0	0	11	6
1 in. by 7 in. " "	0	12	9	0	15	0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £ s. d.			£ s. d.		
Rolled Steel Joists, ordinary sections	7	0	0	... 7	10	0
Compound Girders, ordinary sections	9	0	0	... 10	0	0
Steel Compound Stanchions	11	0	0	... 12	0	0
Angles, Tees, and Channels, ordinary sections	9	0	0	... 10	0	0
Flitch Plates	9	0	0	... 9	10	0
Cast Iron Columns and Stanchions including ordinary patterns	7	10	0	... 8	10	0

METALS.

	Per ton, in London. £ s. d.			£ s. d.		
IRON—						
Common Bars	8	10	0	... 9	0	0
Staffordshire Crown Bars, good merchant quality	8	15	0	... 9	5	0
Staffordshire "Marked Bars"	10	10	0	...	—	
Mild Steel Bars	8	15	0	... 9	5	0
Hoop Iron, basis price	9	5	0	... 9	10	0
" " Galvanised	17	0	0	...	—	
("And upwards, according to size and gauge.)						
Sheet Iron Black—						
Ordinary sizes to 20 g.	9	15	0	...	—	
" " 24 g.	10	15	0	...	—	
" " 26 g.	12	5	0	...	—	
Sheet Iron, Galvanised, flat, ordinary quality—						
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15	0	0	...	—	
Ordinary sizes to 22 g. and 24 g.	15	10	0	...	—	
" " 26 g.	16	10	0	...	—	
Sheet Iron, Galvanised, flat, best quality—						
Ordinary sizes to 20 g.	18	0	0	...	—	
" " 22 g. and 24 g.	18	10	0	...	—	
" " 26 g.	20	0	0	...	—	
Galvanised Corrugated Sheets—						
Ordinary sizes, 6 ft. to 8 ft. 20 g.	14	10	0	...	—	
" " 22 g. and 24 g.	14	15	0	...	—	
" " 26 g.	16	5	0	...	—	
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12	0	0	...	—	
Best Soft Steel Sheets, 22 g. & 24 g.	13	0	0	...	—	
" " " 26 g.	15	0	0	...	—	
Cut Nails, 3 in. to 6 in.	10	10	0	... 11	0	0
(Under 3 in., usual trade extras.)						

LEAD, &c.

	Per ton, in London. £ s. d.			£ s. d.		
LEAD—Sheet, English, 4lb. and up.	17	5	0	...	—	
Pipe in coils	17	15	0	...	—	
Soil pipe	20	15	0	...	—	
Compo pipe	20	15	0	...	—	
ZINC—Sheet— (In casks of 10 cwt.)						
Vielle Montagne	28	12	6	...	—	
Silesian	28	5	0	...	—	
Zinc, in bundles, 1s. per cwt. extra.						
COPPER—						
Strong Sheet per lb.	0	1	0	...	—	
Thin "	0	1	1	...	—	
Copper nails "	0	0	10	...	—	
Copper wire "	0	0	10	...	—	
BRASS—						
Strong Sheet "	0	0	11	...	—	
Thin "	0	1	0	...	—	
TIN—English Ingots "	0	1	6	...	—	
SOLDER—Plumbers' "	0	0	7	...	—	
Tinmen's "	0	0	9	...	—	
Blowpipe "	0	1	0	...	—	

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3d.
" fourths	1½d.	32 oz. thirds	4½d.
21 oz. thirds	3d.	" fourths	4½d.
" fourths	2½d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds	4d.	" 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

Per Ft., Delivered.

⅛ Hartley's	2½d.	Figured, Oxford Rolled, & 'Oceanic'	
¼ "	2½d.	Glass, white	3½d.
⅜ "	2½d.	Ditto, tinted	5d.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 2 11
" " " in barrels	"	0 3 0
" " " in drums	"	0 3 3
Boiled " " in barrels	"	0 3 3
" " " in drums	"	0 3 6
Turpentine in barrels	"	0 3 4
" in drums	"	0 3 6
Genuine Ground English White Lead	per ton	20 10 0
Red Lead, Dry	"	19 10 0
Best Linseed Oil Putty	per cwt.	0 7 6
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursday*. [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted*. † Denotes *provisionally accepted*.

ABERTILLERY.—For extension of the Blaentillery mixed school, for the Urban District Council. Mr. W. H. Riley, Architect, Chapel-street, Abertillery:—

R. Tudor	£3,376 10	J. Jones, Abertillery*	£3,250 0
D. Davies & Sons	3,585 0		

AXMINSTER.—For the erection of two villas, for the Axminster Development Syndicate, Ltd., on the Hakes Building Estate. Messrs. Symes & Madge, architects and surveyors, Somerset House, Chard:—

Newbery & Sons*	£412

BANBURY.—For making-up, paving, channelling, etc., of portion of the road leading to the London and North-Western Railway Station, for the Town Council. Mr. N. H. Dawson, C.E., Borough Surveyor, Town Hall, Banbury:—

J. S. Kimberley, Banbury*	£193

BASINGSTOKE.—For alterations and additions to "The Shrubbery," Cliddesden-road, Basingstoke, for Mr. T. N. Burberry. Mr. W. Roland Howell, architect, Reading, and 18, Percy-street, W.:—

J. H. Margretts & Son	£2,365	Musselwhite & Sapp	£2,259
Collier & Catley	2,299	G. S. Lewis & Bros.	2,240
H. J. Goodall & Son	2,260	J. Harris, Basingstoke*	2,227

BEVERLEY.—For redrainage, etc., East Riding County Lunatic Asylum, Beverley. Messrs. Everard, Son, & Pick, civil engineers, architects and surveyors, 6, Millistone-lane, Leicester:—

Brumby, Robinson, & Son	£12,967 5 10
F. Southern	12,195 0 0
J. Sangwin	11,891 0 0
G. Curtis	11,500 0 0
I. Robinson	10,917 19 4
J. Schofield & Son	10,600 0 0
A. Graham & Co.	10,556 16 1
W. Morley & Sons	10,488 6 7
W. H. Dews & Co.	9,999 0 0
H. Braithwaite & Co., Ltd.	9,621 0 0
A. Braithwaite & Co.	9,473 14 2
P. T. Kettlewell	9,380 0 0
W. Moss & Sons, Ltd., Loughborough*	9,250 0 0

BOURNEMOUTH.—For Winton Council Schools. Mr. F. W. Lacey, M.Inst.C.E., F.R.I.B.A., Borough Engineer:—

J. McWilliam & Son	£16,254	F. J. Privett	£15,227
J. & H. Hayward	16,211	W. Nicholson & Son, Ltd.	14,130
F. Hoare & Sons	16,085	J. & M. Patrick, Point Pleasant, Wandsworth, S.W.*	13,930
Bowman & Sons	15,994		
Jenkins & Sons, Ltd.	15,947		
Jones & Seward	15,936		
Wakeham Bros.	15,641		
Goddard & Sons	15,559		

BOURNEMOUTH.—For West Undercliff Promenade. Mr. F. W. Lacey, M.Inst.C.E., F.R.I.B.A., Borough Engineer:—

Pedrette & Co.	£13,373 17 3
Facey & Son	8,036 15 7
Moran & Son, Ltd.	7,471 17 7
G. Bell & Son	7,451 9 1
Grounds & Newton	6,885 0 0
Harrison & Co.	6,792 0 0
Wimpey & Co.	6,734 17 0
Goddard, Massey, & Warner	6,335 14 8
Wilkinson & Co., Pier Works, Bournemouth*	6,056 0 0

BOURNEMOUTH.—For science, art, and technical schools. Mr. F. W. Lacey, M.Inst.C.E., F.R.I.B.A., Borough Engineer:—

Stephens, Bastow, & Co., Ltd.	£22,376 0 0
McWilliam & Sons	22,478 10 0
F. Hoare & Sons	21,969 0 0
Goddard & Sons	21,590 0 0
Bowman & Sons	20,945 0 0
Smith & Sons, Ltd.	20,550 0 0
E. & A. Springings	20,400 0 0
W. Nicholson & Son (Leeds), Ltd.	20,341 0 0
F. J. Privett	20,212 0 0
W. Johnson & Co., Ltd.	19,957 0 0
W. Pattinson & Sons, Ltd.	19,714 0 0
Jenkins & Sons	19,523 0 0
Wakeham Bros.	19,288 0 0
Jones & Seward	19,270 0 0
J. & M. Patrick, Point Pleasant, Wandsworth, S.W.*	19,055 0 0

CHESHAM.—For main sewers, Bellingdon-road, Sunnyside-road, Amersham-road, etc., for the Urban District Council. Mr. Percy C. Dormer, Engineer and Surveyor, Council Offices, Chesham:—

Rust & Ratcliffe	£1,675 0	W. Y. Green & Co.	£1,345 10
T. Free & Sons	1,620 0	A. T. Catley, 23, Lloyd-square, W.C.‡	1,240 0
Langley & Johnson	1,593 10		
J. Mead	1,463 0		

‡ Recommended for acceptance.
[Engineer's estimate, £1,400.]

CORK.—For erecting shops and cycle factory at No. 5, King-street, for Mr. W. H. Mulligan. Mr. Hugh W. Flanagin, architect, 2, South-mall, Cork:—

A. Gaul	£1,415 0 0
W. O'Connell & Co.	1,354 0 0
J. Kearns & Son	1,243 0 0
Meagher & Hayes, Traver's-street, Cork*	1,192 12 8

EARSDON.—For street works, Duke-street, Pearcy-street, and Emmerson-place, Shiremoor, for the Urban District Council. Mr. J. R. MacMillen, Surveyor, Council Offices, Shiremoor:—

M. D. Young	£292 11 0	J. McLaren, Gosforth*	£219 10
J. Robson	281 6 0		
G. Armstrong	259 6 6		

GALASHIELS.—Accepted for building Galashiels Burgh Academy, Melrose-road, for the School Board. Messrs. J. & J. Hall, architects, Galashiels. Quantities by the architects:—

Mason Work: G. & R. Cousin, Edinburgh	£1,916 19 0
Joiner Work: W. & T. Hobkirk, Hawick	1,270 18 3
Slater Work: L. McLaren & Sons, Galashiels	185 9 2
Glazier Work: R. Mitchell, Hawick	61 9 3
Plaster Work: J. Gardiner, Galashiels	279 10 1
Fittings: W. Scott, Galashiels	495 9 10
Plumber Work: J. Tweedie & Son, Galashiels	295 13 10
Painter Work: Tait Bros., Galashiels	140 17 9
Iron Work: G. Fairbairn, Galashiels	217 15 1
Heating: Mackenzie & Moncur, Edinburgh	347 6 0
Cookery: Speirs & Co., Glasgow	148 10 0

HAILEYBURY.—For new house on the Haileybury College Estate, for Mr. N. Roy D. Tennant. Mr. John W. Simpson and Mr. Maxwell Ayrton, joint architects, 3, Verulam-buildings, Gray's-inn, London, W.C.:—

Killby & Gayford	£2,890	J. K. Cooper & Sons	£2,537
J. A. Hunt	2,836	T. Lowe & Sons	2,492
Kerridge & Shaw	2,696	J. Parnell & Son	2,409
Ekins & Co.	2,684	A. Fairhead & Son, Enfield*	2,357
W. Downs	2,677		

HARLESDEN.—For road making and paving works in Harlesden-gardens, for Willesden District Council. Mr. O. Claude Robson, Engineer, Public Offices, Dyne-road, Kilburn, N.W.:—

	Norway Granite.	Cornish Granite.	Scotch Granite.
T. G. Brummell, Dudden Hill-lane, Willesden	£616	£617	£617*

HULL.—Accepted for colouring and whitewashing, etc., of schools, for the Education Committee:—

Craven-street Junior: J. Codner & Sons, Hull	£22 0
T. B. Holmes: J. Codner & Sons, Hull	53 10
Northumberland-avenue Junior: Crawford & Credland, Hull	32 0
Chapman-street Junior: J. Y. Torr & Sons, Hull	13 17
Middleton-street Infants: J. Y. Torr & Sons, Hull	15 3
Somerset-street: Lightowler & Son, Hull‡	51 0
Thoresby-street Infants: Lightowler & Son, Hull	20 10
Mersey-street Infants: City Engineer, Hull	20 0
St. Wilfrids R.C.: City Engineer, Hull	18 15
Boulevard, Constable-street, Central and Craven-street, Manual Instruction Departments and Craven-street, Laboratories — City Engineer, Hull	64 5

‡ Except Junior Department.

ILFORD.—For woodpaving to the tramway track High-road, for the Urban District Council. Mr. H. Shaw, Engineer and Surveyor, Town Hall, Ilford:—

W. Griffiths & Co., Hamilton House, E.C.*	£399 10

ISLE OF WIGHT.—For erecting an infectious diseases hospital and the laying out of the ground, for the Joint Hospital Board. Mr. S. R. Cocks, architect, Ryde:—

H. E. Day	£8,877 0	H. Linington	£6,825 0
J. Rousell	7,080 0	T. Westbrook	6,720 0
J. Ronsell	7,012 0	J. Ball & Son	6,690 0
T. & E. W. Jenkins	6,964 10	A. Sims	6,440 0
G. Hayles & Son	6,958 0	J. Meader, jun., West Cowes, Isle of Wight*	5,960 0
G. F. Quinton	6,928 0		
W. White	6,866 10		

LOWER HALSTOW.—For sanitary improvements at the Council School, for Kent Education Committee. Mr. W. H. Robinson, Architect and Surveyor to the Kent Education Committee. Quantities by Architect:—

W. Edmonds	£349 0	T. A. Brittenden, Newington, Sittingbourne‡	£221 16
T. Monk	275 0		
G. Bowes	263 10		
Kemp Bros.	259 0		

‡ Recommended by the Managers for acceptance.

NEWPORT (Isle of Wight).—For 250 yds. of 3-in. water main, for the Isle of Wight Hospital Board. Mr. S. R. Cocks, architect, 5, St. Thomas-street, Ryde:—

J. Meader, jun.	£89 10 0
Smith & Whitehead	80 10 0
G. H. Arthur, Newport, Isle of Wight*	79 17 11

NOTTINGHAM.—For house and garage, Ebers-road, Nottingham. Messrs. A. R. Calvert & William R. Gleave, A.R.I.B.A., architects, Nottingham:—

G. Hopewell & Son*	£675

[Lowest of twelve tenders.]

NOTTINGHAM.—For house, Victoria-embankment, Nottingham. Messrs. A. R. Calvert & William R. Gleave, A.R.I.B.A., architects, Nottingham:—

Gilbert & Hall*	£1,371

[Lowest of twelve tenders.]

NOTTINGHAM.—For rebuilding Nos. 14 and 16, Low-pavement, Nottingham. Messrs. A. R. Calvert and William R. Gleave, A.R.I.B.A., architects, Nottingham:—

J. Wright*	£4,177 15 0

[Lowest of eleven tenders.]

NOTTINGHAM.—For house, Lucknow-avenue, Nottingham. Messrs. A. R. Calvert and William R. Gleave, A.R.I.B.A., architects, Nottingham:—

W. Manle & Co.*	£1,109

[Lowest of twelve tenders.]

PANNAL.—For 1,425 yds. of main sewer, Church-lane, for Knaresborough Rural District Council. Mr W. Lupton, Surveyor, 14, Bower-road, Harrogate:—

C. H. Dickinson, 2, Forest-lane, Starbeck, Harrogate	£632

[For Section 1; Section 2 tender not let.]

PONTYRHYL (Glam.).—For the erection of a new infants' Council school, for the Glamorgan Education Committee of Pontyrhyl. Mr. D. Pugh-Jones, F.S.I., County Architect, Cardiff:—

F. W. Loughor & Co., Pontycymmer, Glam.*	£3,177 10

PORT TALBOT.—For the erection of new schools, for Glamorgan County Council Education Committee. Mr. W. James Nash, A.R.I.B.A., Architect, 8, Angel-street, Neath:—

D. Jenkins, Ltd.	£17,000 0 0	J. Goodridge & Son	£13,978 0 0
M. Cox	16,054 18 3	Loughor & Co.	13,261 7 2
Waring, Cole, & Waring	15,152 7 0	G. Mercer	12,695 0 0
D.W. Davies & Howell	14,293 10 10	W. Williams, Cardiff*	12,114 0 0
D. Davies & Sons	14,154 0 0		

RADYR.—For erecting tower, chancel, and vestries at Christ Church, Radyr, near Cardiff, for the Rev. D. Phillips, M.A. Mr. G. E. Halliday, F.R.I.B.A., 19, Castle-street, Cardiff:—

J. Harry	£2,935 18 0	G. Hallet	£2,444 13 3
Ramsley & Sons	2,854 0 0	D. Davies & Sons	2,430 0 0
Stephens Bastow	2,596 0 0	Knox & Wells	2,415 0 0
Symonds & Sons	2,562 0 0	E. Turner & Sons, Cardiff*	2,353 0 0
Hacker Bros.	2,530 0 0	Britton	2,347 9 6
J. Allen	2,515 0 0	E.D.W. Evans	2,316 11 0
H. Smith	2,505 10 0	D. Davies	2,241 10 0
Cox & Bardo	2,481 0 0		

READING.—For alterations and additions to nurses' home, the Workhouse, Reading, for the Guardians of the Poor. Mr. W. Roland Howell, architect, Reading, and 18, Percy-street, London, W.:—

R. Curtis	£2,396	F. Newberry	£2,150
C. Sutton	2,305	G. S. Lewis & Bro.	2,060
Collier & Catley	2,200	R. Webber & Son	1,991
J. H. Margetts & Son	2,187	Patience & Son	1,988
Mc. E. Fitt	2,172	H. W. Godwin‡	1,909

Heating.

Callas, Son, & May	£75 0	J. T. Spencer‡	£56 10
H. C. Goodman	59 10		

‡ Recommended for acceptance.
[All of Reading.]

SALTASH.—For waterworks, for the Urban Sanitary Authority. Mr. H. Bulteel, Engineer, 31, Whimple-street, Plymouth:—
R. T. Relf & Son, Plymouth* £1,643 13 3

SAWBRIDGEWORTH.—For the supply of 625 yds. of 4-in. cast-iron pipes, for the Urban District Council. Mr. H. C. H. Shenton, Engineer, 28, Victoria-street, Westminster, S.W.:—

	Per Ton.		Per Ton.
A. E Nunn & Co.	£5 8 0	Staveley Iron Works Co.	£4 18 4
Sandholme Iron Co.	5 5 0	Locock, Ltd.*	4 17 0
A. G. Cloake	5 1 0		
Holwell Co.	4 19 9		

For Lifts, Lift Tower, Manhole Covers, and Vent Pipes.

Adams, Ltd.*	£905 17 0

Automatic Apparatus.

Enock & Co.*	246 0 0

SAWBRIDGEWORTH.—For the construction of about 4,580 yds. of 6-in., 2,338 yds. of 9-in., and 1,732 yds. of 12-in. stoneware sewers, 425 yds. of 4-in. cast-iron sewer, together with manholes, sewage lift chambers, etc., also for constructing sewage disposal works, consisting of a septic tank and triple contact beds, together with works manager's cottage and other sundry works, for the Urban District Council. Mr. H. C. H. Shenton, Engineer, 28, Victoria-street, Westminster, S.W.:—

Mornement & Ray, Ltd.	£10,481 19 3
W. Morley & Sons	10,301 8 2
G. Deakin	10,065 3 10
W. Muirhead & Co.	9,889 9 0
A. Braithwaite & Co.	9,754 9 4
Acme Flooring Co.	9,629 18 8
J. Honour & Son	9,591 17 1
W. Lawrence & Son	9,250 0 0
Johnson Bros.	9,180 13 5
H. A. Dix & Co.	9,162 12 11
F. Mitchell & Son	8,993 12 2
Petchwick Bros.	8,937 0 0
T. W. Pedrette	8,920 19 2
T. B. Wickstead & Co.	8,868 2 9
G. Bell & Sons	8,642 13 6
D. T. Jackson	8,503 14 10
E. Ireland	8,332 0 0
T. Wood & Son	7,993 19 3
A. E. Nunn & Co.	7,952 4 1
P. R. Paul	7,882 0 0
Johnson & Langley	7,791 2 1
W. & C. French	7,298 0 0
R. C. Brebner & Co.	7,090 19 8
A. E. Farr, Old-road Works, Frinton-on-Sea*	6,749 0 0

SOUTHAMPTON.—For executing private street works in Kingsbury, Imperial, and Empress roads, for the Corporation. Mr. J. A. Crowther, Borough Engineer:—

Empress-road.

Dyer & Sons	£1,235 0	J. Douglas	£935 0
H. Tryhorn	1,136 3	J. Nichol, Southampton*	923 0
F. Osman	1,068 0		

Imperial-road and Kingsbury-road.

Dyer & Sons	£830	J. Nichol	£616
H. Tryhorn	714	J. Douglas, Southampton*	566
F. Osman	697		

STOTFOLD.—For new farm buildings at Manor Lodge, Stotfold, for Mrs. Whitehead. Mr. S. Redhouse, jun., architect, Letchworth Garden City, Herts. Quantities by architect:—

Beckley & Turpie	£1,023 13 6	Morris & Son	£799 0 0
Hudson	996 0 0	Redhouse & Son	750 0 0
Raban & Sons	884 0 0	Bailey & Co., Ashwell*	680 0 0
Launder	817 0 0		

WELLINGBOROUGH.—For erecting girls' secondary school, for Northamptonshire County Council Education Committee. Messrs. Sharman & Archer, architects, Wellingborough:—

R. Marriott	£9,460 0 0	Goodman & Murkett	£8,418 0 0
W. Stevens	9,320 0 0	E. Brown & Son, Ltd.	8,405 0 0
A. Lewin & Son	8,997 10 0	Hacksley Bros., Wellingborough*	8,353 0 0
E. Archer & Sons, Ltd.	8,532 0 0		
T. Hickman	8,463 2 6		

WILLENHALL.—For making a street, Mount Pleasant, for the Urban District Council. Mr. T. Edgar Fellows, C.E., Engineer and Surveyor, Town Hall, Willenhall:—

J. Hickin & Sons	£850 0 0	G. Holloway	£709 0 0
W. H. Reading	765 0 0	J. Owens	667 17 3
J. Atkins	760 13 10	H. Holloway, Wolverhampton*	657 0 0
G. P. Trentham	735 0 0		

WOKING.—For surface water drainage, for the Urban District Council. Mr. G. J. Wooldridge, Engineer, Council Offices, Woking:—

T. W. Pedrette	£3,910 14 8	Muirhead	£3,063 8 1
S. Kavanagh & Co.	3,794 8 9	R. Brebner & Co.	3,050 10 6
Nunn & Co.	3,554 9 6	G. Franks	3,001 2 7
J. Douglas	3,445 0 0	W. H. Wheeler	2,969 3 9
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